Access DB# [illegible]

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: [illegible] Examiner # : [illegible] Date: [illegible]
Art Unit: [illegible] Phone Number 30 ______ Serial Number: [illegible]
Mail Box and Bldg/Room Location: FH 4A07 Results Format Preferred (circle): PAPER DISK E-MAIL

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****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: ______

Inventors (please provide full names): ______

Earliest Priority Filing Date: 6-26-1998

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

He has 7 patents on this so she wants to see if articles..

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STAFF USE ONLY

STAFF USE ONLY		Type of Search		Vendors and cost where applicable	
Searcher:	[illegible]	NA Sequence (#)		STN	
Searcher Phone #:	[illegible]	AA Sequence (#)		Dialog	✓
Searcher Location:	[illegible]	Structure (#)		Questel/Orbit	
Date Searcher Picked Up:	2-4-04	Bibliographic	✓	Dr.Link	
Date Completed:	2-4-04 1230	Litigation		Lexis/Nexis	
Searcher Prep & Review Time:	80	Fulltext	✓	Sequence Systems	
Clerical Prep Time:		Patent Family		WWW/Internet	✓
Online Time:	10	Other		Other (specify)	✓

PTO-1590 (8-01)

STIC Search Report
EIC 2600

STIC Database Tracking Number: 113013

TO: Melanie Vida
Location: CPK1 4A07
Art Unit: 2626
Wednesday, February 04, 2004

Case Serial Number: 09/339,959

From: Pamela Reynolds
Location: EIC 2600
PK2-3C03
Phone: 306-0255

Pamela.Reynolds@uspto.gov

Search Notes

Dear Melanie Vida,

Please find attached the search results for 09/339,959. I used the search strategy I emailed to you to edit, which you did. I searched the standard Dialog files, IBM TDBs, and the internet.

If you would like a re-focus please let me know.

Thank you.

Pamela Reynolds

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File 344:Chinese Patents Abs Aug 1985-2003/Nov
         (c) 2003 European Patent Office
File 347:JAPIO Oct 1976-2003/Sep(Updated 040105)
         (c) 2004 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2004/Jan W05
         (c) 2004 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20040129,UT=20040122
         (c) 2004 WIPO/Univentio
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200408
         (c) 2004  Thomson Derwent
? ds

Set     Items   Description
S1        107   AU=(KAKUTANI, T? OR KAKUTANI T?)
S2         19   S1 AND NETWORK? AND PRINT?
S3         19   IDPAT (sorted in duplicate/non-duplicate order)
S4         19   IDPAT (primary/non-duplicate records only)
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4/5,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01637055
Method of correcting color image data according to correction table
Verfahren zur Korrektur von Farbbilddaten gemass einer Korrekturtabelle
Procede pour la correction de donnees d'images selon une table de correction

PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corporation , 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, 392-8502, (JP
LEGAL REPRESENTATIVE:
Winter, Brandl, Furniss, Hubner, Ross, Kaiser, Polte Partnerschaft (100051), Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Strasse 22, 85354 Freising, (DE)
PATENT (CC, No, Kind, Date): EP 1349373 A2 031001 (Basic)
APPLICATION (CC, No, Date): EP 2003005852 030314;
PRIORITY (CC, No, Date): JP 200279564 020320
DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL; PT; SE; SI; SK; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO
INTERNATIONAL PATENT CLASS: H04N-001/60

ABSTRACT EP 1349373 A2
The technique of the present invention allocates a coordinate point of target image data on a color space to multiple lattice points in a color conversion table and reads data stored at the multiple lattice points. This arrangement ensures high-speed color conversion of the target image data. The procedure selects multiple lattice points and allocates a coordinate point of one target image data to the selected multiple lattice points. The procedure then specifies color-converted image data corresponding to the target image data, based on data read from the multiple lattice points. A first application allocates the target image data to the coordinate points of the multiple lattice points arbitrarily selected in the vicinity of the target image data. A second application allocates N-dimensional target image data to the coordinate points of multiple but not greater than N lattice points. A third application calculates an arithmetic mean of the data read from the multiple lattice points to specify the color-converted image data. Any of these arrangement effectively enhances the conversion accuracy without increasing the size of the color conversion table.
ABSTRACT WORD COUNT: 180
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 031001 A2 Published application without search report
Examination: 031001 A2 Date of request for examination: 20030411
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 200340 3001
SPEC A (English) 200340 30925
Total word count - document A 33926
Total word count - document B 0
Total word count - documents A + B 33926

INVENTOR:

Kakutani, Toshiaki, c/o Seiko Epson Corporation ...

...SPECIFICATION data with an image output unit, such as a CRT, another display, or a color **printer** .

Each of the image output units like displays and color **printers** has intrinsic color reproduction properties. Color correction according to the color reproduction properties of each...tone values of various colors including at least cyan, magenta, and yellow is required to **print** a color image. The image processing apparatus of the above application ensures high-speed conversion...

4/5,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01470564
IMAGE PROCESSING DEVICE, PRINTING CONTROL DEVICE, IMAGE PROCESSING METHOD, AND RECORDED MEDIUM
BILDVERARBEITUNGSGERAT,DRUCKKONTROLLGERAT,BILDVERARBEITUNGSVERFAHREN UND AUFNAHMEMEDIUM
DISPOSITIF ET PROCEDE DE TRAITEMENT D'IMAGES, DISPOSITIF DE COMMANDE D'IMPRESSION, ET SUPPORT ENREGISTRE
PATENT ASSIGNEE:
Seiko Epson Corporation, (2132631), 4-1, Nishishinjuku 2-Chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
KAKUTANI, Toshiaki,c/o SEIKO EPSON CORPORATION , 3-5, Owa 3-chome, Suwa-shi, Nagano 392-8502, (JP
LEGAL REPRESENTATIVE:
Winter, Brandl, Furniss, Hubner, Ross, Kaiser, Polte Partnerschaft (100051), Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Strasse 22, 85354 Freising, (DE)
PATENT (CC, No, Kind, Date): EP 1333659 A1 030806 (Basic)
WO 2002032110 020418
APPLICATION (CC, No, Date): EP 2001972714 011005; WO 2001JP8837 011005
PRIORITY (CC, No, Date): JP 2000307926 001006; JP 2001307214 011003
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04N-001/405; G06T-005/00; B41J-003/00; B41J-005/30

ABSTRACT EP 1333659 A1
When image data is converted into an expression format based on the dot on-off state, such conversion is performed in a unit of a raster group comprising a predetermined number of adjacent rasters. When this is done, the binarization errors occurring in each pixel of the last raster located in the last position of such raster group are diffused into surrounding pixels and stored in a first storage unit. The errors are read out from the first storage unit for dot on-off state determination regarding the first raster of the raster group adjacent to the above-mentioned last raster, and binarization errors occurring in connection with this determination are stored in a second storage unit that permits faster reading and writing of data than the first storage unit. The remaining rasters following the first raster are converted into dot rows by conducting dot on-off state determination for each pixel therein in parallel with the process to convert the first raster into a dot row while taking into account the binarization errors that occurred in the first raster. Consequently, the errors that are taken into account by the pixels of the same raster are stored in the second storage unit

that permits faster high-speed reading and writing of data, and the image data for the raster group can be converted at a high speed.
ABSTRACT WORD COUNT: 223
NOTE:
Figure number on first page: 001

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021023 A1 International application. (Art. 158(1))
Application: 021023 A1 International application entering European phase
Examination: 021023 A1 Date of request for examination: 20020613
Application: 030806 A1 Published application with search report
Examination: 030806 A1 Date of request for examination: 20020613
LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 200332 4413
SPEC A (English) 200332 21636
Total word count - document A 26049
Total word count - document B 0
Total word count - documents A + B 26049

IMAGE PROCESSING DEVICE, PRINTING CONTROL DEVICE, IMAGE PROCESSING METHOD, AND RECORDED MEDIUM
INVENTOR:
KAKUTANI, Toshiaki,c/o SEIKO EPSON CORPORATION ...

...SPECIFICATION that express images through the formation of dots on a display medium such as a **printing** medium or a liquid crystal display are widely used as output devices for various types...processing apparatus described above pertaining to the present invention can be advantageously employed in a **printing** control apparatus that controls a **printing** unit that **prints** images through the formation of ink dots on a **printing** medium by outputting **print** data that controls such ink dot formation.
The first or second image processing apparatus described...

...determination results. Consequently, if the first or second image processing apparatus is applied in the **printing** control apparatus described above, image data can be quickly converted into **print** data. It is advantageous for the **print** data obtained in this manner to be output to the **printing** unit, as it enables the **printing** unit to **print** high-quality images at high speed.
The present invention can be implemented in the form...state.

4/5,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

01470554
IMAGE PROCESSING DEVICE, IMAGE PROCESSING METHOD, RECORDED MEDIUM, AND PROGRAM
BILDVERARBEITUNGSEINRICHTUNG, BILDVERARBEITUNGS-VERFAHREN, AUFGEZEICHNETES MEDIUM UND PROGRAMM
DISPOSITIF DE TRAITEMENT D'IMAGES, PROCEDE DE TRAITEMENT D'IMAGES, SUPPORT D'ENREGISTREMENT, ET PROGRAMME ASSOCIE
PATENT ASSIGNEE:
Seiko Epson Corporation, (2132631), 4-1, Nishishinjuku 2-Chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
KAKUTANI, Toshiaki, c/o SEIKO EPSON CORPORATION, 3-5, Owa 3-chome,

Suwa-shi, Nagano 392-8502, (JP
LEGAL REPRESENTATIVE:
Winter, Brandl, Furniss, Hubner, Ross, Kaiser, Polte Partnerschaft (100051), Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Strasse 22, 85354 Freising, (DE)
PATENT (CC, No, Kind, Date): EP 1331806 A1 030730 (Basic)
WO 2002032113 020418
APPLICATION (CC, No, Date): EP 2001972699 011004; WO 2001JP8774 011004
PRIORITY (CC, No, Date): JP 2000307859 001006
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04N-001/60; H04N-001/46; G06T-001/00; B41J-003/00

ABSTRACT EP 1331806 A1
When color converting image data of a first color coordinate system to image data of a second color coordinate system using a color conversion module, the tone values of said second image data are proportionally increased for conversion in a tone value range in which small dots or light dots are formed. Next, second image data is converted to dot volume data relating to the dot forming density for various dots with different tone values expressed per single dot. At this time, the proportional increase part of the tone values of the second image data is corrected, and suitable dot volume data is obtained. If this is done, even in an area where small dots or light dots are formed, it is possible to supplement insufficient resolution of image data during color conversion, and to display images of high image quality.
ABSTRACT WORD COUNT: 142
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021023 A1 International application. (Art. 158(1))
Application: 021023 A1 International application entering European phase
Application: 030730 A1 Published application with search report
Examination: 030730 A1 Date of request for examination: 20020905
LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 200331 1849
SPEC A (English) 200331 18288
Total word count - document A 20137
Total word count - document B 0
Total word count - documents A + B 20137

INVENTOR:
KAKUTANI, Toshiaki ...

...SPECIFICATION Image display devices that express color images by forming dots of each color on a **printing** medium or on a display medium called a liquid crystal display are widely used as...

...data are converted by each color into a set of specific colors that can be **printed** as dots by an image display device, the obtained various colored image data is converted...the three primary colors of light, and in many cases, when the color image is **printed** , **printing** is done by forming dots of colors including at least cyan, magenta, and yellow which ...

...preferable that the image processing apparatus be able to be broadly

applied to color image **printing** .
Also, for the image processing apparatus described above, it is possible to use a structure...

...also possible to suitably apply the image processing apparatus of the present invention to a **printing** control apparatus that controls a **printing** unit by outputting **printing** data for controlling dot formation to a **printing** unit that **prints** a color image by forming various dots of differing tone values expressed per single dot using ink of various colors on a **printing** medium. Specifically, the image processing apparatus described above can receive image data expressed by a...

...resolution kept as is. Therefore, if the concerned image processing apparatus is applied to a **printing** control apparatus that controls a **printing** unit which can form various types of dots with different tone values expressed per single dot, it is possible to draw out the performance of the **printing** unit and to **print** color images of high image quality.
Also, the present invention can be realized using a...

...of an image display device that can form small dots or light dots and to **print** images of high image quality.
Furthermore, the present invention can also understand a program that ...

...form small dots or light dots, so that images of high image quality can be **printed** .

Brief Description of the Drawings
Figure 1 is a schematic structural diagram of the **printing** system of a first embodiment.
Figure 2 is an explanatory diagram that shows the structure...

4/5,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01470150
IMAGE PROCESSING DEVICE, PRINTING CONTROL DEVICE, IMAGE PROCESSING METHOD, AND RECORDED MEDIUM
BILDVERARBEITUNGSEINRICHTUNG, DRUCKSTEUEREINRICHTUNG, BILDVERARBEITUNGSVERF AHREN UND AUFZEICHNUNGSMEDIUM
DISPOSITIF DE TRAITEMENT D'IMAGE, DISPOSITIF DE COMMANDE D'IMPRESSION, PROCEDE DE TRAITEMENT D'IMAGE ET SUPPORT D'ENREGISTREMENT
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
KAKUTANI, Toshiaki , c/o SEIKO EPSON CORPORATION, 3-5, Owa 3-chome, Suwa-shi, Nagano 392-8502, (JP
LEGAL REPRESENTATIVE:
Winter, Brandl, Furniss, Hubner, Ross, Kaiser, Polte Partnerschaft (100051), Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Strasse 22, 85354 Freising, (DE)
PATENT (CC, No, Kind, Date): EP 1323537 A1 030702 (Basic)
WO 2002030676 020418
APPLICATION (CC, No, Date): EP 2001970331 011001; WO 2001JP8658 011001
PRIORITY (CC, No, Date): JP 2000308029 001006; JP 2001279915 010914
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: B41J-002/52; B41J-002/21; B41J-002/205; H04N-001/405

ABSTRACT EP 1323537 A1

Image data is converted into dot density data representing dot creation densities of variable size dots. The procedure converts the image data into data representing the sum of dot creation densities of a small size dot and a large size dot as the dot density data of the small size dot. The procedure also converts the image data into data representing the sum of dot creation densities of a medium size dot and the large size dot as the dot density data of the medium size dot. The procedure respectively specifies the on-off state of the small size dot and the on-off state of the medium size dot, based on the dot density data of the small size dot and the dot density data of the medium size dot. In the case where both the small size dot and the medium size dot are in the on state in an identical pixel, the procedure specifies creation of the large size dot, in place of the medium size dot and the small size dot. The technique of the present invention enables the on-off state of the large size dot to be quickly specified based on the results of specification with regard to the small size dot and the medium size dot. This arrangement enables the image data to be quickly converted into data of a specific expression format based on the on-off state of the small size dot, the medium size dot, and the large size dot.

ABSTRACT WORD COUNT: 247
NOTE:
Figure number on first page: 0001

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021023 A1 International application. (Art. 158(1))
Application: 021023 A1 International application entering European phase
Examination: 021023 A1 Date of request for examination: 20020613
Application: 030702 A1 Published application with search report
Examination: 030702 A1 Date of request for examination: 20020613
Change: 030910 A1 International Patent Classification changed: 20030724
LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 200327 2141
SPEC A (English) 200327 14186
Total word count - document A 16327
Total word count - document B 0
Total word count - documents A + B 16327

IMAGE PROCESSING DEVICE, PRINTING **CONTROL DEVICE, IMAGE PROCESSING METHOD, AND RECORDED MEDIUM**

INVENTOR:
KAKUTANI, Toshiaki ...

...SPECIFICATION Art

An image display device that creates dots on a display medium, such as a **printing** medium or a liquid crystal display screen, to express an image is widely used as...

...quality.

When the variable dots having different tone values to be expressed are used for **printing** , however, the greater number of the variable dots makes the processing more complicated. It is...resulting image.

The image processing apparatus of the present invention is preferably applicable to a **print** control apparatus that outputs dot data

representing controlled creation of dots to a **printing** device, which creates ink dots to **print** an image on a **printing** medium, and thereby controls the **printing** device. The image processing apparatus discussed above enables the image data to be quickly converted...

...while maintaining the sufficiently high picture quality. Application of the image processing apparatus to the **print** control apparatus thus preferably ensures high-speed **printing** of high-quality images.
The technique of the present invention may be attained by a...
...picture quality.

4/5,K/5 (Item 5 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01414747
Image processing apparatus, method of image processing, print **control apparatus, and recording media**
Bildverarbeitungsvorichtung und -Verfahren, Drucksteuervorrichtung und Aufzeichnungsmedien
Appareil et procede de traitement d'image, appareil de commande d'impression et supports d'enregistrement
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corporation , 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392-8502, (JP
LEGAL REPRESENTATIVE:
Winter, Brandl, Furniss, Hubner, Ross, Kaiser, Polte Partnerschaft (100051), Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Strasse 22, 85354 Freising, (DE)
PATENT (CC, No, Kind, Date): EP 1195982 A2 020410 (Basic)
APPLICATION (CC, No, Date): EP 2001123869 011005;
PRIORITY (CC, No, Date): JP 2000307896 001006; JP 2001238086 010806
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04N-001/405

ABSTRACT EP 1195982 A2
The technique of the present invention temporarily registers a tone error, which arises in each pixel due to determination of the dot on-off state in the pixel, in an intermediate buffer. The technique calculates diffusion errors or error divisions, which are diffused to each of non-processed pixels in a neighborhood of a preset number of pixels, from tone errors arising in the preset number of pixels, and writes the error divisions into an error buffer. One applicable procedure diffuses each tone error into the intermediate buffer in response to every occurrence of the tone error, and subsequently writes the diffused error divisions into the error buffer. Another applicable procedure registers tone errors arising in the preset number of pixels in the intermediate buffer and writes the error divisions, which are calculated from the registered tone errors with regard to the preset number of pixels, into the error buffer. Compared with the conventional technique that diffuses each tone error into the error buffer in response to every occurrence of the tone error, either of these procedures enables collective diffusion of the tone errors with regard to the preset number of pixels, thus ensuring higher-speed diffusion of the tone error. The error diffusion may be attained by utilizing a procedure that is mathematically equivalent to the least mean square error method. The arrangement of the present invention ensures high-speed conversion of image data into a specific

expression format based on the dot on-off state, without deteriorating the picture quality of a resulting image.
ABSTRACT WORD COUNT: 252
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 020410 A2 Published application without search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 200215 3546
SPEC A (English) 200215 24717
Total word count - document A 28263
Total word count - document B 0
Total word count - documents A + B 28263

Image processing apparatus, method of image processing, print **control apparatus, and recording media**
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corporation ...

...SPECIFICATION Related Art
Image display devices that create dots on a display medium, such as a **printing** medium or the screen of a liquid crystal display, to express an image are widely...first image processing apparatus and the second image processing apparatus is favorably applied for a **print** control apparatus, which outputs **print** data for controlling creation of ink dots to a **printing** device that creates ink dots on a **printing** medium to **print** an image, so as to control the **printing** device. Each of the first image processing apparatus and the second image processing apparatus receives...

...of either the first image processing apparatus or the second image processing apparatus to the **print** control apparatus ensures high-speed conversion of the image data into **print** data. The converted **print** data is output to the **printing** device, which then **prints** a high-quality image at a high speed.
The technique of the present invention may...Fig. 1 is an explanatory view showing the general flow of processing executed in a **printing** system of the present invention;
Fig. 2 schematically illustrates the construction of a computer as...
...first embodiment of the present invention;
Fig. 3 schematically illustrates the structure of a color **printer** as an image display device of the first embodiment;
Fig. 4 is a flowchart showing...Fig. 1 is an explanatory view showing the general flow of processing executed in a **printing** system of the present invention. The **printing** system includes a computer 10 as an image processing apparatus and a color **printer** 20. The computer 10 receives tone image data of a color image from an image...

...like a digital camera or a color scanner, and converts the input image data into **print** data expressed by the dot on-off state of respective colors **printable** with the color **printer** 20. A specific program called a **printer** driver 12 is used for the conversion of image data. The computer 10 may create the tone image data of the color image with a diversity of application programs.
The **printer** driver 12 has a multiple of modules, such as a resolution conversion module, a color...

...Series of processing carried out by the other modules will be discussed later. The color **printer** 20 creates dots of respective color inks on a

printing medium, based on resulting **print** data that have undergone the conversions by the respective modules, so as to **print** a color image.

As illustrated in Fig. 1, the tone number conversion module in the **printing** system of the present invention has an intermediate buffer interposed between a tone error calculation...

...writing operations thus undesirably take a long time.

The tone number conversion module in the **printing** system of the present invention utilizes the intermediate buffer having the smaller capacity than that...and a video interface V-I/F 112 for driving a CRT 114. A color **printer** 200 (discussed later) and a hard disk 118 are

4/5,K/6 (Item 6 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01414731
Image processing apparatus, print control apparatus, method of image processing, and recording medium
Bildverarbeitungsvorrichtung, Druckersteuerungsvorrichtung, Bildverarbeitungsverfahren, und Aufzeichnungsmedium
Appareil de traitement d'image, dispositif de commande d'impression, procede de traitement d'image et support d'enregistrement
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
Kakutani, Toshiaki, c/oSeiko Epson Corporation , 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392-8502, (JP
LEGAL REPRESENTATIVE:
Winter, Brandl, Furniss, Hubner, Ross, Kaiser, Polte Partnerschaft (100051), Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Strasse 22, 85354 Freising, (DE)
PATENT (CC, No, Kind, Date): EP 1195984 A2 020410 (Basic)
APPLICATION (CC, No, Date): EP 2001123791 011004;
PRIORITY (CC, No, Date): JP 2000307981 001006; JP 2001238097 010806
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04N-001/60

ABSTRACT EP 1195984 A2
The technique of the present invention carries out color conversion of first image data expressed by a first color system into second image data expressed by a second color system. The procedure first collects multiple adjoining pixels of the first image data into one block, and calculates a tone difference of the first image data in the block based on the first image data of the respective pixels. When the calculated tone difference is less than a preset value, procedure carries out collective color conversion without discrimination of the respective pixels included in the block. This enables the high-speed color conversion When the calculated tone difference is not less than the preset value, on the other hand, the procedure carries out color conversion by a unit of each pixel included in the block. This prevents deterioration of the picture quality. The technique of the invention thus ensures the high-speed color conversion without deteriorating the picture quality.
ABSTRACT WORD COUNT: 157
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 020410 A2 Published application without search report

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 200215 1485
SPEC A (English) 200215 8207
Total word count - document A 9692
Total word count - document B 0
Total word count - documents A + B 9692

Image processing apparatus, print **control apparatus, method of image processing, and recording medium**
INVENTOR:
Kakutani, Toshiaki, c/oSeiko Epson Corporation ...

...SPECIFICATION Description of the Related Art
Application of an image display device, such as a color **printer** or a liquid crystal display unit, enables a color image to be displayed, based on...color conversion.
The image processing apparatus of the present invention is preferably applied to a **print** control apparatus that outputs **print** data for controlling creation of dots to a **printing** device, which creates ink dots on a **printing** medium to **print** an image, thus controlling the **printing** device.
Namely the present invention is directed to a **print** control apparatus that carries out color conversion of first image data expressed by a first...

...second image data expressed by a second color system, converts the second image data into **print** data of a specific expression format based on dot on-off state, and outputs the **print** data to a **printing** device, which creates ink dots on a **printing** medium to **print** an image, thus controlling the **printing** device. The **print** control apparatus includes: a color conversion unit that carries out color conversion of the first...
...dot on-off state of each pixel, based on the second image data; and a **print** data supply unit that outputs a result of the determination of the dot on-off state as the **print** data to the **printing** device. The color conversion unit has: a block information detection module that collects multiple adjoining...

...color conversion while maintaining the picture quality. Application of the image processing apparatus to a **print** control apparatus thus effectively ensures high-speed **printing** of high-quality images.
The technique of the present invention may be attained by a...

4/5,K/7 (Item 7 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01414715
Image processing apparatus, print **control apparatus, image processing method, and recording medium**
Bildverarbeitungsvorrichtung und -Verfahren, Drucksteuervorrichtung und Aufzeichnungsmedium
Appareil et procede de traitement d'image, appareil de commande d'impression et support d'enregistrement
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
Kakutani, Toshiaki , Seiko Epson Corp., 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, 392-8502, (JP

LEGAL REPRESENTATIVE:
Winter, Brandl, Furniss, Hubner, Ross, Kaiser, Polte Partnerschaft (100051), Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Strasse 22, 85354 Freising, (DE)
PATENT (CC, No, Kind, Date): EP 1195981 A2 020410 (Basic)
APPLICATION (CC, No, Date): EP 2001123769 011004;
PRIORITY (CC, No, Date): JP 2000308013 001006; JP 2001238117 010806
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04N-001/405

ABSTRACT EP 1195981 A2
A specific number of adjacent pixels are combined into blocks. The tone values of the pixels in a target block are detected when the dot on-off state is determined, and the fact that the target block does or does not satisfy specific processing conditions is confirmed based on the relation between the magnitudes of the tone values thus detected. The dot on-off state is determined for the target block in block units if the target block satisfies the processing conditions. The conversion procedure can be rapidly performed by adopting this approach. The dot on-off state is determined for the pixels of the target block if the processing conditions are not satisfied. Image quality is thereby prevented from being adversely affected. Image quality can thus be preserved and image data rapidly converted to a specific expression format based on the dot on-off state by performing the conversion procedure in accordance with an appropriate method selected based on whether the processing conditions are satisfied.
ABSTRACT WORD COUNT: 163
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 020410 A2 Published application without search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 200215 2454
SPEC A (English) 200215 15276
Total word count - document A 17730
Total word count - document B 0
Total word count - documents A + B 17730

Image processing apparatus, print **control apparatus, image processing method, and recording medium**

INVENTOR:
Kakutani, Toshiaki ...

...SPECIFICATION which images can be created by the formation of dots on display media such as **print** media or liquid-crystal screens are widely used as the output devices of various types...pixels.

The image-processing apparatus of the present invention can be conveniently adapted to a **print** control apparatus whereby a **print** unit for forming ink dots on a **print** medium and **printing** an image is controlled by the output of **print** data designed to control dot formation. Specifically, the above-described image-processing apparatus is preferred...

...dot on-off state, so adapting the above-described image-processing apparatus to such a **print** control apparatus makes it possible to **print** high-quality images.

Another feature of the present invention is that a program for executing...block.

4/5,K/8 (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01283676
Image processing apparatus and printing **apparatus**
Bildverarbeitungs- und Druckapparat
Appareil de traitement d'images et appareil d'imprimer
PATENT ASSIGNEE:
Seiko Epson Corporation, (2132635), 4-1, Nishi-Shinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Proprietor designated states: all)
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corporation , 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, 392-8502, (JP
LEGAL REPRESENTATIVE:
Winter, Brandl, Furniss, Hubner, Ross, Kaiser, Polte Partnerschaft (100051), Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Strasse 22, 85354 Freising, (DE)
PATENT (CC, No, Kind, Date): EP 1103383 A2 010530 (Basic)
EP 1103383 A3 020925
EP 1103383 B1 030924
APPLICATION (CC, No, Date): EP 2000125155 001117;
PRIORITY (CC, No, Date): JP 99327437 991117
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: B41J-002/205; B41J-002/21; H04N-001/40
CITED PATENTS (EP B): EP 622950 A; EP 808055 A; EP 820187 A; WO 96/32812 A

ABSTRACT EP 1103383 A2
The technique of the present invention improves the picture quality of resulting **prints** , which are subjected to special effects like halftoning, in an ink jet **printer** . With regard to two specific colors, light cyan and light magenta, among six colors, cyan, light cyan, magenta, light magenta, yellow, and black, the technique corrects image data having tone values in a predetermined range with regard to each color with noise data simulating a halftone dot pattern, and carries out a dot distributed-type halftoning process, for example, according to the error diffusion method to **print** an image. Namely the technique provides image data corresponding to a resulting image subjected to special effects like halftoning, and carries out the halftoning process for the image data to implement **printing** . This arrangement attains the high-quality halftone **printing** .
ABSTRACT WORD COUNT: 132
NOTE:
Figure number on first page: 7
LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 010530 A2 Published application without search report
Change: 020925 A2 International Patent Classification changed: 20020806
Search Report: 020925 A3 Separate publication of the search report
Examination: 021204 A2 Date of request for examination: 20021007
Grant: 030924 B1 Granted patent
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 200122 784
CLAIMS B (English) 200339 788
CLAIMS B (German) 200339 709

CLAIMS B (French) 200339 984
SPEC A (English) 200122 12131
SPEC B (English) 200339 12150
Total word count - document A 12918
Total word count - document B 14631
Total word count - documents A + B 27549

Image processing apparatus and printing **apparatus**
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corporation ...

...ABSTRACT A2
The technique of the present invention improves the picture quality of resulting **prints**, which are subjected to special effects like halftoning, in an ink jet **printer**. With regard to two specific colors, light cyan and light magenta, among six colors, cyan...

...a dot distributed-type halftoning process, for example, according to the error diffusion method to **print** an image. Namely the technique provides image data corresponding to a resulting image subjected to...

...effects like halftoning, and carries out the halftoning process for the image data to implement **printing**. This arrangement attains the high-quality halftone **printing**.

...SPECIFICATION an image processing apparatus that carries out halftoning of multi-tone image data and a **printing** apparatus that creates dots according to halftone data obtained as a result of the halftoning process and thereby **prints** an image.

Description of the Related Art
Ink jet **printers** have widely been used as the output device of images processed by the computer. The ink jet **printer** creates dots on a **printing** medium with ink ejected from a plurality of nozzles formed on a **print** head, so as to record an image. The ink jet **printer** is generally capable of expressing only two tones, that is, the dot-on state and...

4/5,K/9 (Item 9 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01103868
Printer **-system, method for** printing **, and recording medium for implementing the method**
Drucksystem, Druckverfahren und Aufzeichnungsmedium zur Durchfuhrung des Verfahrens
Systeme d'impression, procede d'impression et support d'enregistrement pour la mise en oeuvre du procede
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730000), 4-1, Nishishinjuku 2-chome, Shinjuku-ku Tokyo-to, (JP), (Applicant designated States: all)
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corp. 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392-8502, (JP
LEGAL REPRESENTATIVE:
Tothill, John Paul (81551), Frank B. Dehn & Co. 179 Queen Victoria Street , London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 967787 A2 991229 (Basic)
EP 967787 A3 020619
APPLICATION (CC, No, Date): EP 99305030 990625;
PRIORITY (CC, No, Date): JP 98196793 980626

DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04N-001/40

ABSTRACT EP 967787 A2
A **printer** -system for **printing** or recording images using a plurality of dots having different densities. The **printer** system includes a head (28) for producing at least 2 different types of dots having different densities per unit area, an input unit (90) for receiving input tone data with respect to each of the pixels in an original image, a threshold value storage unit (90) for storing threshold values, a multi-valuing unit (90) for determining the on-off state of a dot and the type of the dot to be created at each pixel, and a dot creation unit (40) for driving the **printer** head (28). **Print** image quality is degraded for example when, around any specific input tone value, there are abrupt changes in the number density of large dots to small dots. The multi-valuing unit (90), employing error diffusion techniques, changes the threshold values for selecting the type of dot **printed** to control the relative density of large dots at each input tone value and thus regulates the **print** image quality.
ABSTRACT WORD COUNT: 171
NOTE:
Figure number on first page: 15

LEGAL STATUS (Type, Pub Date, Kind, Text):
Search Report: 020619 A3 Separate publication of the search report
Application: 991229 A2 Published application without search report
Change: 030319 A2 Designated contracting states changed 20030129
Examination: 030226 A2 Date of request for examination: 20021218
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 199952 1429
SPEC A (English) 199952 11209
Total word count - document A 12638
Total word count - document B 0
Total word count - documents A + B 12638

Printer **-system, method for** printing **, and recording medium for implementing the method**
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corp. 3-5 ...

...ABSTRACT A2
A **printer** -system for **printing** or recording images using a plurality of dots having different densities. The **printer** system includes a head (28) for producing at least 2 different types of dots having...

...to be created at each pixel, and a dot creation unit (40) for driving the **printer** head (28). **Print** image quality is degraded for example when, around any specific input tone value, there are...

...90), employing error diffusion techniques, changes the threshold values for selecting the type of dot **printed** to control the relative density of large dots at each input tone value and thus regulates the **print** image quality.

4/5,K/10 (Item 10 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01096655

Printer , **method of** printing , **and recording medium for implementing the method**

Drucker, Druckverfahren, und Aufzeichnungstrager zur Durchfuhrung des Druckverfahrens

Imprimante, procede d'impression, et support d'enregistrement pour la mise en oeuvre du procede

PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
Kakutani, Toshiaki , c/o Seiko Epsom Corporation, 3-5 Owa 3-chome, Suwa-shi, Nagano-ken 392-8502, (JP
LEGAL REPRESENTATIVE:
Tothill, John Paul (81551), Frank B. Dehn & Co. 179 Queen Victoria Street , London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 962323 A1 991208 (Basic)
APPLICATION (CC, No, Date): EP 99304224 990528;
PRIORITY (CC, No, Date): JP 98170634 980602
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: B41J-002/205; B41J-002/21

ABSTRACT EP 962323 A1

In a known **printer** that may create different types of dots having different densities or different ink quantities, there is a problem that the types of dots to be created in the respective pixels included in an image are not determined by taking into account the restriction of ink duty. A **printer** (22) of the present invention has a head (28) that provides two inks of different densities, that is, a higher-density ink and a lower-density ink, with respect to at least one hue, and may create dots of different ink quantities. The technique of the present invention provides a table that stores expected quantities of inks to be spouted for respective color components of image data corresponding to tone values regarding the respective color components of the image data. The technique refers to the table and sets an expected quantity of ink to be spouted for each color component in each pixel based on input image data, in order to keep the restriction of ink duty. The technique then carries out a multi-valuing process for each color component and determines creation or non-creation of the respective types of dots having different ink quantities, so as to make the quantity of ink actually spouted in each pixel closed to the expected quantity of ink. This arrangement enables the different types of dots having different densities or different ink quantities to be created appropriately, while keeping the restriction of ink duty.
ABSTRACT WORD COUNT: 241
NOTE:
Figure number on first page: 17

LEGAL STATUS (Type, Pub Date, Kind, Text):
Examination: 021113 A1 Date of dispatch of the first examination report: 20021001
Examination: 20000322 A1 Date of request for examination: 20000124
Application: 991208 A1 Published application with search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 9949 1594
SPEC A (English) 9949 13799
Total word count - document A 15393
Total word count - document B 0
Total word count - documents A + B 15393

Printer , **method of** printing , **and recording medium for implementing the method**
INVENTOR:
Kakutani, Toshiaki ...

...ABSTRACT A1
In a known **printer** that may create different types of dots having different densities or different ink quantities, there...

...an image are not determined by taking into account the restriction of ink duty. A **printer** (22) of the present invention has a head (28) that provides two inks of different...

SPECIFICATION The present invention relates to a **printer** having a head, which provides inks of different densities with respect to at least one ...

...to each of the different density inks, and enabling a multi-tone image to be **printed** with inks spouted from the head. The present invention also pertains to a method of **printing** as well as a recording medium for implementing the method.
Color **printers** that spout multiple colors of inks from a head are widely used as an output device of a computer, which **prints** images processed by the computer in a multi-color, multi-tone manner. In order to further improve the **printing** quality in an area of low image density, that is, a highlighted area, a **printer** and a **printing** method using higher density and lower density inks have been proposed. This technique provides both...

4/5,K/11 (Item 11 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01081060
Printing **method,** printing **apparatus, and recording medium**
Druckverfahren, Druckgerat, und Aufzeichnungstrager
Procede d'impression, appareil d'impression, et support d'enregistrement
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
Kakutani, Toshiaki , c/o Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392-8502, (JP
LEGAL REPRESENTATIVE:
Tothill, John Paul (81551), Frank B. Dehn & Co. 179 Queen Victoria Street , London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 951176 A2 991020 (Basic)
EP 951176 A3 011017
APPLICATION (CC, No, Date): EP 99301679 990305;
PRIORITY (CC, No, Date): JP 9873426 980305; JP 98299175 981005
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04N-001/40
ABSTRACT EP 951176 A2
In a **printing** apparatus that enables at least three different types of dots to be created in different ink weights by at least two different inks having an identical hue but different densities, the halftone processing is carried out in an appropriate sequence and according to an appropriate technique, which are determined by taking into account both the dispersibility of dots and the processing speed. The method of the present invention determines the on-off state of six different types of dots, which have different ink densities and ink weights, in the sequence

of the large deep dot, the medium deep dot, the small deep dot, the large light dot, the medium light dot, and the small light dot. The dots created by an identical ink are subjected to the determination for the on-off state in a consecutive manner. A dither method that utilizes the recording ratio set for each type of dot according to the tone data is adopted in the determination for the on-off state of the dot. The method determines the on-off state of a target dot, based on a corrected recording ratio. The corrected recording ratio is obtained by adding the recording ratios of all the dots previously subjected to the determination for the on-off state to the recording ratio of the target dot.

ABSTRACT WORD COUNT: 218

NOTE:

Figure number on first page: 11

LEGAL STATUS (Type, Pub Date, Kind, Text):
Search Report: 011017 A3 Separate publication of the search report
Application: 991020 A2 Published application without search report
Examination: 020102 A2 Date of request for examination: 20011106
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9942	3641
SPEC A	(English)	9942	18834

Total word count - document A 22475
Total word count - document B 0
Total word count - documents A + B 22475

Printing **method,** printing **apparatus, and recording medium**

INVENTOR:
Kakutani, Toshiaki ...

...ABSTRACT A2

In a **printing** apparatus that enables at least three different types of dots to be created in different...

SPECIFICATION The present invention relates to a **printing** method, which creates at least three different types of dots and thereby enables **printing** of a multi-tone image, as well as a **printing** apparatus to actualize the **printing** method. The invention also pertains to a recording medium on which a program for actualizing the **printing** method is recorded.

An ink jet **printer** proposed as an output apparatus of the computer creates dots with inks of different colors...

...nozzles mounted on a head and thereby records a multi-color image. The ink jet **printer** has widely been used to **print** an image processed by the computer in a multi-color, multi-tone manner. In this **printer** , each pixel typically has only two tones, that is, the dot-on state and the dot-off state. An image is accordingly **printed** after the halftone processing, which is the image processing performed to enable the tone of ...

...dispersibility of dots.

In order to enrich the tone expression, the recently proposed ink jet **printer** is a multi-valuing **printer** that enables the tone expression of each pixel in three or a greater number of values. One example of the multi-valuing **printer** varies the dot diameter and the ink density and thus enables three or a greater number of different densities for each dot. Another example of the multi-valuing **printer** creates a plurality of dots in each pixel in an overlapping manner to enable the multi-tone expression. In these **printers** , the halftone processing is required

since the tone of the original image data can not...

...advantage of the error diffusion method is the excellent picture quality.
In the multi-valuing **printer** that enables tone expression in three or a greater number of values, a plurality of...

...dots individually. In order to enable the smooth expression of multiple tones and realize the **printing** of high picture quality, it is desirable to prevent the dots of the identical hue...

4/5,K/12 (Item 12 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01063008
Dot recording with plural nozzle groups
Punktaufzeichnung mit mehreren Dusengruppen
Enregistrement par points avec plusieurs groupes de buses
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (Applicant designated States: all)
INVENTOR:
Kakutani, Toshiaki , c/o Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, 392-8502, (JP
LEGAL REPRESENTATIVE:
Tothill, John Paul (81551), Frank B. Dehn & Co. 179 Queen Victoria Street , London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 936573 A2 990818 (Basic)
EP 936573 A3 020403
APPLICATION (CC, No, Date): EP 99301153 990217;
PRIORITY (CC, No, Date): JP 9852739 980217
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: G06K-015/10; B41J-002/21
ABSTRACT EP 936573 A2
A plurality of nozzles in use are classified into M nozzle groups, each nozzle group including Neff nozzles, where Neff is an integer of not less than 2 and M is an integer of not less than 2. A plurality of dot positions on each raster line are also classified into M different types of dot positions. The Neff nozzles included in each nozzle group execute dot recording at one identical type of dot positions, whereas the different nozzle groups respective execute dot recording at different types of dot positions. A variety of methods are applicable for the nozzle classification. One available method classifies the plurality of nozzles into the M nozzle groups that are sequentially aligned in a sub-scanning direction to be separated from each other. In another available method, the plurality of nozzles are sequentially allocated to the M element groups one by one along the sub-scanning direction
ABSTRACT WORD COUNT: 151
NOTE:
Figure number on first page: 28A 28B 28C 28D

LEGAL STATUS (Type, Pub Date, Kind, Text):
Search Report: 020403 A3 Separate publication of the search report
Application: 990818 A2 Published application without search report
Examination: 021009 A2 Date of request for examination: 20020806
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count

CLAIMS A (English) 9933 1187
SPEC A (English) 9933 16460
Total word count - document A 17647
Total word count - document B 0
Total word count - documents A + B 17647

INVENTOR:
Kakutani, Toshiaki ...

SPECIFICATION The present invention relates to a technique of recording dots on the surface of a **printing** medium with a dot recording head having a plurality of nozzle groups.

Serial scan-type **printers** and drum scan-type **printers** are dot recording devices which record dots with a recording head while carrying out scans...

...and Japanese Patent Laid-Open Gazette No. 53-2040, for improving the image quality of **printers** of this type, especially ink jet **printers**.

Fig. 35 is a diagram for explaining an example of the interlace scheme. In this specfication, the following parameters are used to define a **printing** scheme.
N: Number of nozzles;
k: Nozzle pitch (dots);
s: Number of scan repeats;
D...

...No. 4-19030 is another technique used to improve image quality in color ink jet **printers**.

Fig. 36 is a diagram for explaining an example of the overlap scheme. In the...at all the different types of dot positions in an effective recording area of the **printing** medium.

There are a large number of available combinations of the dot-forming element classifications...

...embodied in a carrier wave.

An apparatus for recording dots on a surface of a **printing** medium comprises: a dot recording head having a dot-forming element array, the dot-forming...

...scan driving unit that moves at least one of the dot record head and the **printing** medium to carry out a main scan; a head driving unit that use at least...

4/5,K/13 (Item 13 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01002199
DOT RECORDING METHOD AND DOT RECORDING DEVICE
PUNKTAUFZEICHNUNGSVERFAHREN UND OUNKTAUFZEICHNUNGSVORRICHTUNG
PROCEDE D'ENREGISTREMENT DE POINTS ET DISPOSITIF D'ENREGISTREMENT ASSOCIE
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
KAKUTANI, Toshiaki, Seiko Epson Corp., 3-5, Owa 3-chome, Suwa-shi Nagano-ken 392-8502, (JP)
SHIMADA, Kazumichi, Seiko Epson Corp., 3-5, Owa 3-chome, Suwa-shi Nagano-ken 392-8502, (JP)
KANAYA, Munehide, Seiko Epson Corp., 3-5, Owa 3-Chome, Suwa-shi Nagano-ken 392-8502, (JP)

NAKAJIMA, Hisanori, Seiko Epson Corp., 3-5, Owa 3-chome, Suwa-shi
Nagano-ken 392-8502, (JP)
MITSUZAWA, Toyohiko, Seiko Epson Corp., 3-5, Owa 3-chome, Suwa-shi
Nagano-ken 392-8502, (JP
LEGAL REPRESENTATIVE:
Tothill, John Paul (81551), Frank B. Dehn & Co. 179 Queen Victoria Street
, London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 925920 A1 990630 (Basic)
WO 9845119 981015
APPLICATION (CC, No, Date): EP 98911237 980407; WO 98JP1605 980407
PRIORITY (CC, No, Date): JP 10673597 970408; JP 11022398 980406
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: B41J-002/01; B41J-002/51;
CITED PATENTS (WO A): JP 8224911 A

ABSTRACT EP 925920 A1
A specific image is first recorded according to a plurality of dot recording schemes which have an identical resolution and which are different at least in sub-scan feed operations. Then a desired dot recording scheme is selected corresponding to a desired recorded image which has been selected out of a plurality of recorded images recorded according to the plurality of dot recording schemes, and scheme selection information for specifying the desired dot recording scheme is stored into a rewritable non-volatile memory. In actual image recording, the scheme selection information stored in the non-volatile memory is read out, and a desired image is recorded on a recording medium according to the desired dot recording scheme specified by the scheme selection information.
ABSTRACT WORD COUNT: 121

LEGAL STATUS (Type, Pub Date, Kind, Text):
Search Report: 011107 A1 Date of drawing up and dispatch of supplementary:search report 20010921
Application: 990324 A1 International application (Art. 158(1))
Change: 011114 A1 Legal representative(s) changed 20010926
Search Report: 011114 A1 Date of drawing up and dispatch of supplementary:search report 20011001
Change: 011107 A1 International Patent Classification changed: 20010918
Change: 011107 A1 International Patent Classification changed: 20010918
Application: 990630 A1 Published application (A1with Search Report ;A2without Search Report)
Examination: 990630 A1 Date of filing of request for examination: 981231
LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 9926 1490
SPEC A (English) 9926 17146
Total word count - document A 18636
Total word count - document B 0
Total word count - documents A + B 18636

INVENTOR:
KAKUTANI, Toshiaki, Seiko Epson Corp ...

...SPECIFICATION The present invention relates to a technique of recording dots on the surface of a **printing** medium with a dot recording head.

BACKGROUND ART
Serial scan-type **printers** and drum scan-type **printers** are dot

recording devices which record dots with a recording head while carrying out scans...

...and Japanese Patent Laid-Open Gazette No. 53-2040, for improving the image quality of **printers** of this type, especially ink jet **printers**.

Fig. 26 is a diagram for explaining an example of the interlace scheme.

In this specification, the following parameters are used to define a **printing** scheme.

N: Number of nozzles;

k: Nozzle pitch (dots);

s: Number of scan repeats;

4/5,K/14 (Item 14 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS
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00999747

PRINTER, IMAGE FORMATION METHOD AND RECORDING MEDIUM
DRUCKER, BILDAUFZEICHNUNGSVERFAHREN UND AUFZEICHNUNGSMATERIAL
IMPRIMANTE, PROCEDE DE FORMATION D'IMAGES ET SUPPORT D'ENREGISTREMENT

PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730004), 4-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0811, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
SHIMADA, Kazumichi, Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392-8502, (JP)
KAKUTANI, Toshiaki, Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392-8502, (JP)
YONEKUBO, Shuji, Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392-8502, (JP)
KATAKURA, Takahiro, Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392-8502, (JP
LEGAL REPRESENTATIVE:
Tothill, John Paul et al (81551), Frank B. Dehn & Co. 179 Queen Victoria Street, London EC4V 4EL, (GB)

PATENT (CC, No, Kind, Date): EP 925939 A1 990630 (Basic)
WO 9843818 981008
APPLICATION (CC, No, Date): EP 98911170 980401; WO 98JP1517 980401
PRIORITY (CC, No, Date): JP 8423397 970402; JP 9948697 970416; JP 33652997 971119
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: B41J-002/205;
CITED PATENTS (WO A): JP 2252567 A ; JP 5031886 A

ABSTRACT EP 925939 A1

The present invention prevents deterioration of the quality in interlace **printing**. The **printing** system of the present invention uses a head that regulates the amount of ink spouting from nozzles and forms dots of different diameters. While the diameter of dots formed in one primary scan is restricted to a fixed value, the system of the present invention enables dots of different diameters to coexist at an appropriate ratio, thereby improving the **printing** quality. The **printing** system of the present invention shifts a nozzle array, in which nozzles are arranged at intervals of a predetermined dot pitch, by a predetermined amount in the secondary scanning direction and varies the dot diameter on every primary scan, while controlling the nozzles in an overlapping state. This enables the dots of different diameters to coexist in a specified area. One preferable application carries out halftone processing under the conditions for dots of a certain diameter at the position where a dot of the certain diameter is formed. This application controls the ratio of dot formation to a desired level. For

example, the probability of formation of small-diametral dots is increased in a low-density area. Another preferable application divides the nozzle array on a **print** head into two groups of nozzles, wherein each group of nozzles forms dots of a specified size. Appropriate selection of the nozzle pitch and the quantity of secondary scanning feed enables **printing** in which large-diametral dots and small-diametral dots coexist according to a predetermined rule.
ABSTRACT WORD COUNT: 247

LEGAL STATUS (Type, Pub Date, Kind, Text):
Change: 010411 A1 Legal representative(s) changed 20010221
Application: 990317 A1 International application (Art. 158(1))
Examination: 021106 A1 Date of dispatch of the first examination report: 20020919
Application: 990630 A1 Published application (A1with Search Report ;A2without Search Report)
Examination: 990630 A1 Date of filing of request for examination: 990312
Search Report: 991110 A1 Date of drawing up and dispatch of supplementary:search report 19990929
Change: 991117 A1 International Patent Classification changed: 19990924
LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9926	2686
SPEC A	(English)	9926	19946

Total word count - document A 22632
Total word count - document B 0
Total word count - documents A + B 22632

PRINTER , **IMAGE FORMATION METHOD AND RECORDING MEDIUM**
INVENTOR:
... JP)
KAKUTANI, Toshiaki, Seiko Epson Corporation ...

...ABSTRACT A1
The present invention prevents deterioration of the quality in interlace **printing** . The **printing** system of the present invention uses a head that regulates the amount of ink spouting...

...invention enables dots of different diameters to coexist at an appropriate ratio, thereby improving the **printing** quality. The **printing** system of the present invention shifts a nozzle array, in which nozzles are arranged at...

...increased in a low-density area. Another preferable application divides the nozzle array on a **print** head into two groups of nozzles, wherein each group of nozzles forms dots of a...

...size. Appropriate selection of the nozzle pitch and the quantity of secondary scanning feed enables **printing** in which large-diametral dots and small-diametral dots coexist according to a predetermined rule.

SPECIFICATION TECHNICAL FIELD
The present invention relates to a **printing** system, a method of generating an image, and a recording medium for realizing the method. More specifically the present invention pertains to a **printing** system that records at least two types of dots having different diameters on a **printing** object and generates a multi-tone image expressed by recording densities of the at least...

...a recording medium on which programs for realizing this method are recorded.

BACKGROUND ART

Color **printers** , in which a plurality of color inks are discharged from a head, are widely used...

...a multi-color, multi-tone image processed by the computer. Several methods are applicable to **print** a multi-color, multi-tone image with three color inks, cyan, magenta, and yellow (CMY). One method is a technique adopted in conventional **printers** . This technique expresses the tone of a **printing** image by the density of dots (frequency of appearance of dots per unit area) while...

...of dots formable per predetermined length or the variable range of the dot diameter, the **printers** have only a limited **printing** density(resolution) of 300 through 720 dpi and a limited particle diameter of several ten microns. The resolution of **printers** is significantly lower than the resolution of silver photography, which has reached several thousand dpi on the film.

In ink jet **printers** , dots recorded on a sheet of paper may be conspicuous at some **printing** densities. Further reduction of the dot diameter is accordingly required to improve the **printing** quality. An increase in number of dot-forming elements per color disposed on a **print** head is also required to improve the **printing** speed. By way of example, in an ink jet **printer** having a **print** head reciprocating relative to the sheet of paper, one proposed technique increases the number of...

4/5,K/15 (Item 15 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00926463
PRINTER **AND IMAGE RECORDING METHOD**
DRUCKER UND BILDAUFZEICHNUNGSVERFAHREN
IMPRIMANTE ET PROCEDE D'ENREGISTREMENT D'IMAGES
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome, Shinjuku-ku, Tokyo 163, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
KAKUTANI, Toshiaki , Seiko Epson Corp., 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392, (JP
LEGAL REPRESENTATIVE:
Tothill, John Paul et al (81551), Frank B. Dehn & Co. 179 Queen Victoria Street, London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 863019 A1 980909 (Basic)
WO 9803341 980129
APPLICATION (CC, No, Date): EP 97930830 970717; WO 97JP2491 970717
PRIORITY (CC, No, Date): JP 96209232 960718; JP 96327845 961122
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: B41J-002/21;

ABSTRACT EP 863019 A1

In accordance with inputted half-tone data, the table of recording rates with dark ink is referred to first and it is determined by a systematic dithering method whether dark dots are formed or not. If it is determined that dark dots are formed, a pieozoelectric element (PE) of the head of the ink is driven to form dark dots and a result value (RV) is calculated. On the other hand, if it is determined that dark dots are not formed, the result value RV is 0. In accordance with the inputted half-tone data, it is judged by a method of error diffusion whether dots

are formed with low darkness ink or not. Further, the result value is calculated. As a result, the darkness error between a formed image and the original image is decreased to a minimum by the ON/OFF of light dots. Therefore, when a **printer** which **prints** by using dots whose darkness per unit area is different is used, the ON/OFF of the different types of dots are adequately determined and the quality of the **printing** can be improved. Further, a constitution wherein the presence/absence of dots of achromatic color ink influences the formation of dots of cyan ink may be employed.
ABSTRACT WORD COUNT: 205

LEGAL STATUS (Type, Pub Date, Kind, Text):
Change: 010411 A1 Legal representative(s) changed 20010221
Application: 980527 A1 International application (Art. 158(1))
Application: 980909 A1 Published application (A1with Search Report ;A2without Search Report)
Examination: 980909 A1 Date of filing of request for examination: 980416
Search Report: 991222 A1 Date of drawing up and dispatch of supplementary:search report 19991110
Change: 991229 A1 International Patent Classification changed: 19991105
LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 9837 4981
SPEC A (English) 9837 18690
Total word count - document A 23671
Total word count - document B 0
Total word count - documents A + B 23671

PRINTER **AND IMAGE RECORDING METHOD**
INVENTOR:
KAKUTANI, Toshiaki ...

...ABSTRACT is decreased to a minimum by the ON/OFF of light dots. Therefore, when a **printer** which **prints** by using dots whose darkness per unit area is different is used, the ON/OFF of the different types of dots are adequately determined and the quality of the **printing** can be improved. Further, a constitution wherein the presence/absence of dots of achromatic color...

SPECIFICATION Technical Field
The present invention relates to a **printing** system with a head, which forms at least two different dots having different densities per...

...the head, as well as to a method of recording such images.

Background Art
Color **printers** , in which a plurality of color inks are discharged from a head, are widely used...

...a multi-color, multi-tone image processed by the computer. Several methods are applicable to **print** a multi-color, multi-tone image with three color inks, cyan, magenta, and yellow (CMY). One method is a technique adopted in the conventional **printers** . This technique expresses the tone of a **printed** image by the density of dots (frequency of appearance of dots per unit area) while...

4/5,K/16 (Item 16 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00914701

Printing **system and image recording method**

Drucksystem und Bildaufzeichnungsverfahren

Systeme d'impression et procede d'enregistrement

PATENT ASSIGNEE:

SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome, Shinjuku-ku, Tokyo 163, (JP), (Applicant designated States: all)

INVENTOR:

Kakutani, Toshiaki , c/o Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392, (JP

LEGAL REPRESENTATIVE:

Tothill, John Paul et al (81551), Frank B. Dehn & Co. 179 Queen Victoria Street, London EC4V 4EL, (GB)

PATENT (CC, No, Kind, Date): EP 835025 A2 980408 (Basic)
EP 835025 A3 000322

APPLICATION (CC, No, Date): EP 97307726 971001;

PRIORITY (CC, No, Date): JP 96281332 961001; JP 97214110 970723

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; RO; SI

INTERNATIONAL PATENT CLASS: H04N-001/40; H04N-001/52

ABSTRACT EP 835025 A2

In a **printer** for **printing** an image by a distribution of dots having different densities per unit area or dots having different hues, the structure of the present invention accurately determines the on/off state of the different dots and ensures high quality **printing** . Recording ratios Rn and Rt of deep dots and light dots corresponding to input tone data DS in a target pixel are read from a map representing the relationship between the recording ratios and the tone data. The systematic dither method is adopted to determine formation or non-formation of a deep dot in the target pixel. This method compares the recording radio Rn of deep dots with a threshold value Dref corresponding to the target pixel and read from a threshold matrix TM. In the case where a deep dot is not formed, the recording ratio Rt of light dots is corrected by adding the recording ratio Rn of deep dots and subsequently compared with the same threshold value Dref to determine formation or non-formation of a light dot in the target pixel. The structure of the present invention uses only one threshold matrix to realize desired recording ratios without causing any overlap of deep dots with light dots. This structure is also applicable to dots having different hues. In this case, one threshold matrix is used to determine the on/off state of dots having different hues without causing any interference of the different hues.

ABSTRACT WORD COUNT: 239

NOTE:

Figure number on first page: 14B

LEGAL STATUS (Type, Pub Date, Kind, Text):

Examination:	000802 A2 Date of request for examination: 20000606
Search Report:	20000322 A3 Separate publication of the search report
Examination:	031126 A2 Date of dispatch of the first examination report: 20031014
Change:	010411 A2 Legal representative(s) changed 20010221
Application:	980408 A2 Published application (A1with Search Report ;A2without Search Report)

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9815	1860
SPEC A	(English)	9815	12656

Total word count - document A 14516

Total word count - document B 0

Total word count - documents A + B 14516

Printing **system and image recording method**
INVENTOR:
Kakutani, Toshiaki ...

...ABSTRACT A2
In a **printer** for **printing** an image by a distribution of dots having different densities per unit area or dots...

...invention accurately determines the on/off state of the different dots and ensures high quality **printing** . Recording ratios Rn and Rt of deep dots and light dots corresponding to input tone...

SPECIFICATION The present invention relates to a **printing** system having a head, from which inks are dischargeable to form at least two different...

...pertains to an image recording method for recording a multi-tone image in such a **printing** system.
Color **printers** , in which a plurality of color inks are discharged from a head, are widely used...

...a multi-color, multi-tone image processed by the computer. Several methods are applicable to **print** a multi-color, multi-tone image with three color inks, cyan, magenta, and yellow (CMY). One method is a technique adopted in conventional **printers** . This technique expresses the tone of a **printed** image by the density of dots (frequency of appearance of dots per unit area) while...

4/5,K/17 (Item 17 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00897819
Printing **system and method of recording images**
Drucksystem und Bildaufzeichnungsverfahren
Systeme d'impression et procede d'enregistrement d'images
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730008), 4-1, Nishi-Shinjuku 2-chome, Shinjuku-ku, Tokyo, (JP), (Applicant designated States: all)
INVENTOR:
Kakutani, Toshiaki , c/o Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, (JP
LEGAL REPRESENTATIVE:
Tothill, John Paul et al (81551), Frank B. Dehn & Co. 179 Queen Victoria Street, London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 820187 A2 980121 (Basic)
EP 820187 A3 991222
APPLICATION (CC, No, Date): EP 97305301 970716;
PRIORITY (CC, No, Date): JP 96209232 960718; JP 97165128 970606
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; RO; SI
INTERNATIONAL PATENT CLASS: H04N-001/52

ABSTRACT EP 820187 A2
The present invention appropriately determines the on/off state of dots having different hues in a **printer** using at least two inks of different hues, thereby enhancing the quality of **printing** . The system of the present invention applies the systematic dither method to determine whether or not dots are to be formed by ink of a predetermined hue, for

example, magenta. In the case of formation of dots by magenta ink, the system drives a piezoelectric element PE disposed on a head corresponding to the magenta ink to form magenta dots and calculates a resulting value MRST. In the case of non-formation of dots by the magenta ink, on the other hand, the resulting value MRST is set equal to zero. The system then applies the technique of error diffusion to determine whether or not dots are to be formed by cyan ink, based on the tone data of the cyan ink. The structure of the present invention enables a difference between density data M(x,y) of the magenta ink and its resulting value MRST to affect density data of the cyan ink. This makes it difficult to form dots of cyan ink in the vicinity of dots of magenta ink.

ABSTRACT WORD COUNT: 200

NOTE:

Figure number on first page: 22

LEGAL STATUS (Type, Pub Date, Kind, Text):

Examination: 000726 A2 Date of request for examination: 20000602

Application: 980121 A2 Published application (A1with Search Report ;A2without Search Report)

Change: 010411 A2 Legal representative(s) changed 20010221

Search Report: 991222 A3 Separate publication of the search report

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9804	3421
SPEC A	(English)	9804	17072

Total word count - document A 20493

Total word count - document B 0

Total word count - documents A + B 20493

Printing **system and method of recording images**

INVENTOR:

Kakutani, Toshiaki ...

...ABSTRACT present invention appropriately determines the on/off state of dots having different hues in a **printer** using at least two inks of different hues, thereby enhancing the quality of **printing** . The system of the present invention applies the systematic dither method to determine whether or...

SPECIFICATION BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to a **printing** system with a head that can create at least two different types of dots having...

...of the dots, as well as to a method of recording images with such a **printing** system.

Description of the Related Art

Color **printers** , in which a plurality of color inks are discharged from a head, are widely used...

...computer. There are several techniques available for creating multi-tone images in the process of **printing** multi-color images with three color inks, cyan, magenta, and yellow (CMY). One available technique, which is adopted in the conventional **printers** , expresses the tone of a **printed** image by the density of dots (the frequency of appearance of dots per unit of...

...formable per predetermined length or the variable range of dot diameters. The improvement in such **printers** has, however, so far been limited to 300 dpi through 720 dpi in **printing** density or resolution

and several tens microns in particle diameter. This is significantly lower than...

...low image density, that is, in an area of low density of dots to be **printed** . This increases the degree of granularity and makes the dots undesirably conspicuous. The proposed technique concerns the multi-valued process, for example, half-toning process in **printers** , in order to equalize the frequency of appearance of the respective color dots in the area of low **printing** density.

Even in the system for equalizing the frequency of appearance of the respective color...

4/5,K/18 (Item 18 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00893788
Printing **system utilizing inks of different densities, cartridge used therefor, and method of recording images**
Drucksystem mit Verwendung von Tinten verschiedener Dichte, Kartusche zur Verwendung damit, und Bildaufzeichnungsverfahren
Systeme d'impression utilisant des encres a densite differente, cartouche utilisee pour celui-ci, et procede d'enregistrement d'images
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome, Shinjuku-ku, Tokyo 163, (JP), (Applicant designated States: all)
INVENTOR:
Shimada, Kazumichi, c/o Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, (JP)
Kakutani, Toshiaki , c/o Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, (JP
LEGAL REPRESENTATIVE:
Tothill, John Paul et al (81551), Frank B. Dehn & Co. 179 Queen Victoria Street, London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 817464 A2 980107 (Basic)
EP 817464 A3 000308
APPLICATION (CC, No, Date): EP 97304670 970627;
PRIORITY (CC, No, Date): JP 96188233 960627; JP 96297608 961018
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; SI
INTERNATIONAL PATENT CLASS: H04N-001/40; H04N-001/52

ABSTRACT EP 817464 A2

The present invention utilizes a high-density ink (C1,M1) and a low-density (C2,M2) ink with respect to a specific color ink, so as to improve the **printing** quality. The procedure of the present invention reads a recording ratio of deep dots by the high-density ink corresponding to input tone data from a table and determines whether or not deep dots by the high-density ink are to be formed in a target pixel. In the case that deep dots are to be formed, a piezoelectric element PE on a head of the high-density ink is driven to form deep dots. In the case that deep dots are not to be formed, on the other hand, the procedure determines whether or not light dots by the low-density ink are to be formed in the target pixel by referring to the table, and specifies the on/off state of the light dots in order to cause a mean recording ratio of the light dots to be equal to a predetermined value. In the table, formation of deep dots starts in the range of tone data smaller than the specific value of tone data (95) that gives a maximum recording ratio (60%) of light dots. This results in smooth color mixture at a joint between a record with light dots and a record with deep dots, thereby ensuring extremely high **printing** quality. The recording ratio

of light dots may be varied according to the density of another color ink at a position corresponding to the target pixel as well as the density of the target color ink.
ABSTRACT WORD COUNT: 262
NOTE:
Figure number on first page: 14

LEGAL STATUS (Type, Pub Date, Kind, Text):
Examination: 001102 A2 Date of request for examination: 20000831
Search Report: 20000308 A3 Separate publication of the search report
Change: 010411 A2 Legal representative(s) changed 20010221
Application: 980107 A2 Published application (A1with Search Report ;A2without Search Report)
Change: 991201 A2 International Patent Classification changed: 19991009
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 9802 1714
SPEC A (English) 9802 10293
Total word count - document A 12007
Total word count - document B 0
Total word count - documents A + B 12007

Printing **system utilizing inks of different densities, cartridge used therefor, and method of recording images**
INVENTOR:
... JP)
Kakutani, Toshiaki ...

...ABSTRACT C2,M2) ink with respect to a specific color ink, so as to improve the **printing** quality. The procedure of the present invention reads a recording ratio of deep dots by...

...a record with light dots and a record with deep dots, thereby ensuring extremely high **printing** quality. The recording ratio of light dots may be varied according to the density of...

SPECIFICATION The present invention relates to a **printing** technique utilizing inks of different densities, that is, high-density ink and low-density ink. More particularly the present invention pertains to a **printing** system for regulating a distribution of dots formed by at least two inks of different densities based on tone signals representing an image, so as to **print** a multi-tone image, a cartridge used for such a **printing** system, and a method of **printing** images.
Color **printers**, in which a plurality of color inks are discharged from a head, are widely used...

4/5,K/19 (Item 19 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00826543
Image processing method and image processing apparatus
Bildverarbeitungsverfahren und -gerat
Procede et appareil de traitement d'images
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730008), 4-1, Nishi-Shinjuku 2-chome, Shinjuku-ku, Tokyo, (JP), (Proprietor designated states: all)
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corp., 3-5 Owa, 3-chome, Suwa-shi,

Nagano, (JP
LEGAL REPRESENTATIVE:
Sturt, Clifford Mark et al (50502), Miller Sturt Kenyon 9 John Street, London WC1N 2ES, (GB)
PATENT (CC, No, Kind, Date): EP 767580 A2 970409 (Basic)
EP 767580 A3 990317
EP 767580 B1 030402
APPLICATION (CC, No, Date): EP 96307243 961003;
PRIORITY (CC, No, Date): JP 95260582 951006; JP 96161282 960621
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: H04N-001/405
CITED PATENTS (EP B): EP 631427 A; EP 715450 A

ABSTRACT EP 767580 A2
An image processing method for converting multi-gradation image data into two-gradation image data by employing an error diffusion method, the image processing method comprises the steps of: (1) adding a diffusion error derived from at least one pixel which has already been binary-coded and is located near a pixel of interest to multi-gradation image data of this pixel of interest to thereby obtain corrected data; (2) comparing the corrected data with a threshold value and converting the corrected data into two-gradation image data for indicating any one of a dot ON and a dot OFF; (3) calculating a quantizing error corresponding to a difference between the corrected data and a first evaluation value corresponding to the two-gradation image data; (4) diffusing the quantizing error to a plurality of pixels which have not yet been binary-coded and are located near the pixel of interest; and (5) varying the first evaluation value corresponding to the two-gradation image data indicative of the dot ON in accordance with the multi-gradation image data of the pixel of interest.
ABSTRACT WORD COUNT: 174
NOTE:
Figure number on first page: 4
LEGAL STATUS (Type, Pub Date, Kind, Text):
Examination: 020502 A2 Date of dispatch of the first examination report: 20020320
Application: 970409 A2 Published application (A1with Search Report ;A2without Search Report)
Grant: 030402 B1 Granted patent
Search Report: 990317 A3 Separate publication of the European or International search report
Examination: 991110 A2 Date of request for examination: 19990915
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) EPAB97 1171
CLAIMS B (English) 200314 1401
CLAIMS B (German) 200314 1184
CLAIMS B (French) 200314 1595
SPEC A (English) EPAB97 6017
SPEC B (English) 200314 6707
Total word count - document A 7189
Total word count - document B 10887
Total word count - documents A + B 18076
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corp ...

...SPECIFICATION output apparatus such as, for instance, a CRT display, a liquid crystal display, and a **printer** . Otherwise, these multi-gradation image data and multi-gradation graphic image data are reproduced to...

...image data is employed as the image output apparatus. In such a case

that a **printer** and a display device are employed in which the gradation cannot be controlled with respect...

...brightness and lightness in a CRT, and an amount of ink in an ink jet **printer** . The expression "dot ON" implies that for instance, ink droplets are jetted on a white paper in an ink jet **printer** , write light is illuminated on a photosensitive drum in an electro-photographic **printer** , a thermographic paper is heated in a thermal **printer** , and an electron beam is projected onto a fluorescent screen of a CRT. Another expression

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File 348:EUROPEAN PATENTS 1978-2004/Jan W05
         (c) 2004 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20040129,UT=20040122
         (c) 2004 WIPO/Univentio
? ds

Set     Items   Description
S1      24135   (DIFFERENT OR CHANG? OR VARY??? OR ADAPTIVE? OR VARIABLE OR
             VARIES)(3N)DENSIT?
S2     137359   DOT OR PIXEL? OR (PICTURE OR PICTORIAL)(3N)ELEMENT OR PEL -
            OR DPI OR DOTS()PER()INCH
S3       5845   (VARIABLE OR VARYING OR CHANGING OR ADAPTIVE?)(5N)(THRESHO-
            LD? OR DITHER? OR TONE()CURVE? OR THRESHOLD()TABLE OR THRESHO-
            LD()MEMORY)
S4       1371   INPUT()(TONE? OR GRADATION? OR COLOR? OR INK?? OR COLORANT?
             OR COLOURANT? OR COLOUR?)
S5       1511   ERROR()(DIFFUSION? OR DISPERSION? OR SPREAD? OR DISTRIBUT?)
S6      69765   IC=(B41J? OR H04N?)
S7          0   S1(S)S2(S)S3(S)S4
S8       1553   S1(S)S2
S9         14   S8(S)S3
S10         4   S9(S)(TONE? OR GRADATION? OR COLOR? OR INK?? OR COLORANT? -
             OR COLOURANT? OR COLOUR?)
S11         4   IDPAT (sorted in duplicate/non-duplicate order)
S12         4   IDPAT (primary/non-duplicate records only)
S13        45   S8(S)S5
S14        29   S13(S)(TONE? OR GRADATION? OR COLOR? OR INK?? OR COLORANT?
             OR COLOURANT? OR COLOUR?)
S15        26   S14 AND S6
S16        26   S15 NOT S10
S17         9   S16 AND AD=19980626:20040204/PR
S18        17   S16 NOT S17
S19        17   IDPAT (sorted in duplicate/non-duplicate order)
S20        17   IDPAT (primary/non-duplicate records only)
S21         5   S1(5N)(DOT OR DOTS)(7N)S3
S22         4   S21 NOT (S15 OR S10)
S23         1   S22 AND AD=19980626:20040204/PR
S24         3   S22 NOT S23
S25       445   S1(5N)(DOT OR DOTS)
S26         3   S25(10N)S4
S27         1   S26 NOT (S21 OR S15 OR S10)
S28         3   S25(10N)S5
S29         0   S28 NOT (S26 OR S21 OR S15 OR S10)
```

12/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00753993
Image halftoning system
Bildhalbtonrasterungssystem
Systeme pour l'obtention d'images en demi-teintes
PATENT ASSIGNEE:
XEROX CORPORATION, (219781), Xerox Square - 020, Rochester New York 14644 , (US), (applicant designated states: DE;FR;GB)
INVENTOR:
Harrington, Steven J., 76 S. Main Street, Holley NY 14470, (US)
LEGAL REPRESENTATIVE:
Skone James, Robert Edmund et al (50281), GILL JENNINGS & EVERY Broadgate House 7 Eldon Street, London EC2M 7LH, (GB)
PATENT (CC, No, Kind, Date): EP 710007 A2 960501 (Basic)
EP 710007 A3 971119
APPLICATION (CC, No, Date): EP 95307564 951024;
PRIORITY (CC, No, Date): US 328741 941027
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: H04N-001/405
ABSTRACT WORD COUNT: 111

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB96	701
SPEC A	(English)	EPAB96	3752
Total word count - document A			4453
Total word count - document B			0
Total word count - documents A + B			4453

...SPECIFICATION area to form dots providing varying gray density. Threshold patterns are commonly classified by the " **dot** " that they produce, with two common threshold patterns A and B producing either dispersed **dot** patterns or clustered **dot** patterns, examples of which are shown, respectively. Note that here, "spot" refers to the smallest unit printable by the IOT, typically a **pixel** , while the term " **dot** " refers to the collection of spots printed corresponding to a screen cell. The different types...

...use of clustered dots, as single spots do not reproduce well with xerographic processes, while **ink** jet lOT's use dispersed dots as a method of preventing bleeding and puddling problems...

12/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00461826
Thermoplastic resin composition and article comprising the same.
Thermoplastische Harzmasse und diese enthaltender Gegenstand.
Composition thermoplastique en resine et article contenant cette composition.
PATENT ASSIGNEE:
SUMITOMO CHEMICAL COMPANY, LIMITED, (214347), 5-33, Kitahama 4-chome Chuo-ku, Osaka, (JP), (applicant designated states: BE;DE;FR;GB;IT;NL)
INVENTOR:

Abe, Hiroomi, 251-75, Naganumacho, Chiba-shi, (JP)
Fujii, Takeshi 2848-19, Kubota, Sodegauramachi, Kimitsu-gun Chiba-ken, (JP)
Mitsui, Kiyoshi, 832-4, Shiizu, Ichihara-shi, (JP)
Shinonaga, Hideo, 285-172, Higashiterayamacho, Chiba-shi, (JP)
Sogabe, Satoru 33-16, Kuranamidai-6-chome, Sodegauramachi, Kimitsu-gun Chiba-ken, (JP)
Hosoda, Satoru, 872-2, Saihiro, Ichihara-shi, (JP)
Kojima, Keitaro, 98, Daijuku, Sodegauramachi, Kimitsu-gun, Chiba-ken, (JP)
LEGAL REPRESENTATIVE:
Vossius & Partner (100311), Siebertstrasse 4 P.O. Box 86 07 67, W-8000 Munchen 86, (DE)
PATENT (CC, No, Kind, Date): EP 456259 A1 911113 (Basic)
APPLICATION (CC, No, Date): EP 91107632 910510;
PRIORITY (CC, No, Date): JP 90121724 900511
DESIGNATED STATES: BE; DE; FR; GB; IT; NL
INTERNATIONAL PATENT CLASS: C08L-077/00; C08L-023/02; C08L-065/02; C08L-067/02;
ABSTRACT WORD COUNT: 157

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	1587
SPEC A	(English)	EPABF1	19112
Total word count - document A			20699
Total word count - document B			0
Total word count - documents A + B			20699

...SPECIFICATION television camera and converted to a digital image on a display having 512 x 512 **pixels** and 256 **gradation** steps in **variable density** per **pixel** . A **threshold** value was determined with regard to the **variable density** , and only white portions, i.e. polyamide resin portions, were extracted from the image under...

12/3,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00220965
Image processing method and image forming apparatus.
Verfahren zur Bildbearbeitung und Gerat zur Bilderzeugung.
Procede de traitement d'images et appareil de formation d'images.
PATENT ASSIGNEE:
KONICA CORPORATION, (206970), 26-2, Nishi-shinjuku 1-chome Shinjuku-ku, Tokyo, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
Fukuchi, Masakazu, No.1, 112-5, Inume-Cho, Hachioji-shi Tokyo, (JP)
Akazawa, Kiyoshi, No. 805-108, Uchikoshi-cho, Hachioji-shi Tokyo, (JP)
Matsunawa, Masahiko, Hirai Mansion 103 No. 272, Kumagawa, Fussa-shi Tokyo , (JP)
Niki, Hiroshi, Konishiroku Ohwadaryo No.2-5-19, Ohwada-cho, Hachioji-shi Tokyo, (JP)
Matsuo, Shunji, No. 3-8-4, Ohsakaue, Hino-shi Tokyo, (JP)
Yamamoto, Hiroyuki, No. 3-7-704, Wakabadai Asahi-ku, Yokohama-shi Kanagawa, (JP)
Abe, Yoshinori, Mogusa Danchi 1-3-5 No. 999, Mogusa, Hino-shi Tokyo, (JP)
LEGAL REPRESENTATIVE:
Ben-Nathan, Laurence Albert et al (28211), Urquhart-Dykes & Lord 91

Wimpole Street, London W1M 8AH, (GB)
PATENT (CC, No, Kind, Date): EP 217503 A1 870408 (Basic)
EP 217503 B1 911030
APPLICATION (CC, No, Date): EP 86305732 860725;
PRIORITY (CC, No, Date): JP 85166549 850727; JP 85236766 851022
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G03G-015/01; H04N-001/40;
ABSTRACT WORD COUNT: 86

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1302
CLAIMS B	(German)	EPBBF1	658
CLAIMS B	(French)	EPBBF1	870
SPEC B	(English)	EPBBF1	14932
Total word count - document A			0
Total word count - document B			17762
Total word count - documents A + B			17762

...SPECIFICATION at linear speed of 20 mm/sec
magnet 8 poles, rotating at 600 rpm
flux **density** 700 Gauss (sleeve **surface**) Developer:
carrier magnetic powder resin dispersion system,
average particle size (weight basis) 20 (mu)m, specific resistance 10(sup 1)(sup 4) Ohm.cm or above, magnetization approx 50 emu/ **g** 6(**sub** 1)(sub 0)(sub 0)(sub 0)), 6(sub 1)(sub 0)(sub 0)(sub...the resulting particles, whenever necessary.

A granulation polymerisation method can be used, too, as the **toner** production method. When a **toner** having a particle diameter of as small as from 1 to 10 (mu)m is produced by the granulation polymerization method, there is obtained a spherical **toner** which can be used in the present invention.

Various thermoplastic resins can be used as...

12/3,K/4 (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00909145 **Image available**
PLANAR LASER ILLUMINATION AND IMAGING (PLIIM) SYSTEMS WITH INTEGRATED DESPECKLING MECHANISMS PROVIDED THEREIN
SYSTEMES PLIIM D'ILLUMINATION ET D'IMAGERIE AU LASER PLANAIRE A MECANISME DE DECHATOIEMENT INTEGRE
Patent Applicant/Assignee:
METROLOGIC INSTRUMENTS INC, 90 Coles Road, Blackwood, NJ 08012, US, US (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
TSIKOS Constantine J, 65 Woodstone Drive, Voorhees, NJ 08043-4749, US, US (Residence), US (Nationality), (Designated only for: US)
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(Nationality), (Designated only for: US)
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COLAVITO Stephen J, 3520 Edgewater Lane, Brookhaven, PA 19015-2607, US, US (Residence), US (Nationality), (Designated only for: US)
WILZ David W Sr, 10 Orion Way, Sewell, NJ 08080, US, US (Residence), US (Nationality), (Designated only for: US)
SCHWARTZ Barry E, 407 Farwood Road, Haddonfield, NJ 08033, US, US (Residence), US (Nationality), (Designated only for: US)
KIM Steve Y, 129 Franklin Street, #113, Cambridge, MA 02139, US, US (Residence), US (Nationality), (Designated only for: US)
FISCHER Dale, 204 Sunshire Lakes Drive, Voorhees, NJ 08043, US, US (Residence), US (Nationality), (Designated only for: US)
VAN Tassel John E Jr, 8 Arbor Lane, Winchester, MA 01890, US, US (Residence), US (Nationality), (Designated only for: US)

Legal Representative:
PERKOWSKI Thomas J (et al) (agent), Thomas J. Perkowski, Esq., P.C., Soundview Plaza, 1266 East Main Street, Stamford, CT 06902, US,

Patent and Priority Information (Country, Number, Date):
Patent: WO 200243195 A2-A3 20020530 (WO 0243195)
Application: WO 2001US44011 20011121 (PCT/WO US0144011)
Priority Application: US 2000721885 20001124; US 2001780027 20010209; US 2001781665 20010212; US 2001883130 20010615; US 2001954477 20010917; US 2001999687 20011031
Parent Application/Grant:
Related by Continuation to: US 2001954477 20010917 (CIP)
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 298301
Fulltext Availability:
Claims

Claim
... the transmitted PUB is spatial phase modulated along its wavefront, producing numerous substantially different time- **varying** specklenoise patterns at the image detection array of the lFD Subsystem during the photo-integration...and attribute acquisition subsystems, wherein each PLlIMbased subsystem employs visible laser diodes (VLDs) having different **color** producing wavelengths to produce a multi-spectral planar laser illumination beam (PLIB), and a 1...

...e.g. produce) that are processed in order to determine the shape/geometry, dimensions and **color** of such products in diverse retail shopping environments;
Fig. 33B is a schematic representation of...attribute acquisition subsystems, wherein each PLIIM-based subsystem employs visible laser diodes (VLDs) having different **color** producing wavelengths to produce a multi-spectral planar laser illumination beam (PLIB), and a 2...

...e.g. produce) that are processed in order to determine the shape/geometry, dimensions and **color** of such products in diverse retail shopping environments;
Fig. 34B is a schematic representation of...
?

20/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01447042
Improved colour halftoning for printing with multiple inks
Verbesserte Farbhalbtonerzeugung zum Drucken mit mehreren Tinten
Creation amelioree de demi-teintes en couleurs pour imprimer avec des encres multiples
PATENT ASSIGNEE:
AGFA-GEVAERT, (200395), Septestraat 27, 2640 Mortsel, (BE), (Applicant designated States: all)
INVENTOR:
Vande Velde, Koen, AGFA-GEVAERT Corporate IP Department 3800, Septestraat 27, 2640, Mortsel, (BE)
Delabastita, Paul, c/o AGFA-GEVAERT, Corporate IP Department 3800, Septestraat 27, B-2640 Mortsel, (BE)
PATENT (CC, No, Kind, Date): EP 1239662 A1 020911 (Basic)
APPLICATION (CC, No, Date): EP 2001000053 010309;
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: **H04N-001/52** ; **H04N-001/40**
ABSTRACT WORD COUNT: 178
NOTE:
Figure number on first page: 3

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200237	509
SPEC A	(English)	200237	5924
Total word count - document A			6433
Total word count - document B			0
Total word count - documents A + B			6433

INTERNATIONAL PATENT CLASS: **H04N-001/52** ...

... **H04N-001/40**

...SPECIFICATION According to an embodiment of the current invention, the above procedure can be extended multilevel **colour error - diffusion** . Suppose that the output system is capable to record N > 2 multiple densities D0)), D1)),...DN-1)) or droplet sizes of each of the three **inks** (c,m,y), resulting in N > 2 intensity levels I0)), I1)), ..., IN-1)) for each of the three basic **colours** . For N density levels, D0)), D1)),...DN-1)), there are M = 1 + 3 * (N-1...
...b. The guiding Brightness halftone process may use M intensity levels. E.g. for 4 **different ink densities** , N = 4 and M = 10. As depicted in Fig 4 the N levels for each of the three **colours** , divide the rgb-cube into (N-1)3) sub-cubes. To reduce the number of computations as well as to improve the quality of the halftoning, the quantization **colour** of a **pixel** is preferably restricted to be one of the **colours** situated on the corners of the sub-cube in which the original **colour** of that **pixel** is situated.
Furthermore, Preferably the quantized B-value for a pixel is restricted by a...

20/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

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01447041

Adequate quantisation in multilevel halftoning
Ausreichende Quantisierung bei der Multipegelhalbtonerzeugung
Quantification adequate pour l'obtention de demi-teintes a niveaux multiples

PATENT ASSIGNEE:
AGFA-GEVAERT, (200395), Septestraat 27, 2640 Mortsel, (BE), (Applicant designated States: all)
INVENTOR:
Vande Velde, Koen, AGFA-GEVAERT Corperate IP, Department 3800, Septestraat 27, 2640 Mortsel, (BE)
Delabastita, Paul, c/o AGFA-GEVAERT, Corporate IP Department 3800, Septestraat 27,, B-2640 Mortsel, (BE)
LEGAL REPRESENTATIVE:
Van Ostaeyen, Marc Albert Jozef et al (86097), Agfa-Gevaert N.V. Corporate IP Department 3800 Septestraat 27, 2640 Mortsel, (BE)
PATENT (CC, No, Kind, Date): EP 1239660 A1 020911 (Basic)
APPLICATION (CC, No, Date): EP 2001000052 010309;
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: **H04N-001/40** ; **H04N-001/52**
ABSTRACT WORD COUNT: 140
NOTE:
Figure number on first page: 2

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200237	585
SPEC A	(English)	200237	3765
Total word count - document A			4350
Total word count - document B			0
Total word count - documents A + B			4350

INTERNATIONAL PATENT CLASS: **H04N-001/40** ...

... **H04N-001/52**

...SPECIFICATION pixel. At a particular position either a dot or no dot can be placed.

Today, **ink** -jet as well as electrophotographic printers exist that render N>2 intensity or density levels. The inkjet printers are able to deliver variable droplet sizes or use multiple **inks** of the same hue, but different densities, both procedures resulting effectively in reproduction of multiple possible density levels for one printed dot. Halftoning algorithms, such as **error diffusion** may be extended to the multilevel (i.e. N>2) case. See e.g...

...by Dispoto et al describing a method for rendering a grey scale image with variable **dot** sizes. A continuous **tone** image is an image containing multiple grey levels with no perceptible quantization to them. In a different multilevel halftoning technique all different continuous **tone pixel** values within a range (e.g. 0-255) are mapped onto the N allowable values...deviating coloured pixels. Excessive deviations of the modified input pixel value 27 due to the **error diffusion** algorithm are thus avoided and corrected.

In another embodiment, it is possible that not all...

20/3,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00926463
PRINTER AND IMAGE RECORDING METHOD
DRUCKER UND BILDAUFZEICHNUNGSVERFAHREN
IMPRIMANTE ET PROCEDE D'ENREGISTREMENT D'IMAGES
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome, Shinjuku-ku, Tokyo 163, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
KAKUTANI, Toshiaki, Seiko Epson Corp., 3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392, (JP)
LEGAL REPRESENTATIVE:
Tothill, John Paul et al (81551), Frank B. Dehn & Co. 179 Queen Victoria Street, London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 863019 A1 980909 (Basic)
WO 9803341 980129
APPLICATION (CC, No, Date): EP 97930830 970717; WO 97JP2491 970717
PRIORITY (CC, No, Date): JP 96209232 960718; JP 96327845 961122
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **B41J-002/21**
ABSTRACT WORD COUNT: 205
LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9837	4981
SPEC A	(English)	9837	18690
Total word count - document A			23671
Total word count - document B			0
Total word count - documents A + B			23671

INTERNATIONAL PATENT CLASS: **B41J-002/21**

...SPECIFICATION first dot is to be formed. In this application, the first printing system further includes **error diffusion** means, which computes a difference between a printing density corresponding to the input **tone** signal and a printing density realized by the formed dots as a density error, based on the determination of **dot** formation by the first **dot** formation determination means and the second **dot** formation determination means. The **error diffusion** means then distributes the density error to peripheral **pixels** in the vicinity of a current target **pixel** of **dot** formation, in order to reflect upon the determination of **dot** formation with respect to the peripheral **pixels** by the first **dot** formation determination means and the second **dot** formation determination means.

The present invention is also directed to a second printing system with ...tone value to be realized by a first dot selected among the at least two **different** dots having **different densities** per unit area, based on the input **tone** signal. The first **dot** formation determination means determines whether or not the first **dot** is to be formed, based on the first **dot tone** value. The correction signal computing means computes a correction signal by adding quantization errors distributed from peripheral processed **pixels** in the vicinity of the target **pixel** to the input **tone** signal. The second **dot** formation determination means carries out the processing, based on the correction signal. When the first **dot** formation determination means determines no formation of the first **dot** , the second **dot** formation determination means determines

whether or not a second **dot** having a **different density** per unit area from that of the first **dot** is to be formed. The head driving means drives the head based on results of the determination by the first **dot** formation determination means and the second **dot** formation determination means, in order to form the at least two **different** dots having **different densities** per unit area. The **error diffusion** means computes a quantization error, which is a difference between the correction signal and a **tone** value realized by the formed dots, as a density error, based on the results of the determination by the first **dot** formation determination means and the second **dot** formation determination means, and distributes and diffuses the computed density error to peripheral **pixels** in the vicinity of the target **pixel** .

This structure enables a density error due to formation of the first dot to be...the systematic dither method to determine the on/off state of deep dots and the **error diffusion** method to determine the on/off state of light dots. A variety of other known...

...CLAIMS said cyan and magenta inks and activating said second dot formation determination means and said **error diffusion** means.

18. A printing system with a head, which forms at least two different dots...

20/3,K/4 (Item 4 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS
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00877604

Recording apparatus, recording method, information processing apparatus and recording medium

Aufzeichnungsgerat, Aufzeichnungsverfahren, Informationsverarbeitungsgerat und Aufzeichnungsmedium

Appareil d'enregistrement, procede d'enregistrement, appareil de traitement d'information et support d'enregistrement

PATENT ASSIGNEE:
CANON KABUSHIKI KAISHA, (542361), 30-2, 3-chome, Shimomaruko, Ohta-ku, Tokyo, (JP), (applicant designated states: DE;FR;GB;IT)
INVENTOR:
Takahashi, Kiichiro, Canon Kabushiki Kaisha, 30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, (JP)
Ohtsuka, Naoji, Canon Kabushiki Kaisha, 30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, (JP)
Nishikori, Hitoshi, Canon Kabushiki Kaisha, 30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, (JP)
Iwasaki, Osamu, Canon Kabushiki Kaisha, 30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, (JP)
LEGAL REPRESENTATIVE:
Beresford, Keith Denis Lewis et al (28273), BERESFORD & Co. 2-5 Warwick Court High Holborn, London WC1R 5DJ, (GB)

PATENT (CC, No, Kind, Date): EP 803367 A2 971029 (Basic)
EP 803367 A3 980812
APPLICATION (CC, No, Date): EP 97302736 970422;
PRIORITY (CC, No, Date): JP 96101617 960423; JP 97104712 970422
DESIGNATED STATES: DE; FR; GB; IT
INTERNATIONAL PATENT CLASS: **B41J-002/205** ; **B41J-002/21** ; G06K-015/10
ABSTRACT WORD COUNT: 114

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count

CLAIMS A (English) 9710W4 2204
SPEC A (English) 9710W4 17792
Total word count - document A 19996
Total word count - document B 0
Total word count - documents A + B 19996

INTERNATIONAL PATENT CLASS: **B41J-002/205** ...

... **B41J-002/21**
...SPECIFICATION multi-value data of 4, 12, 16 bits etc. Also in the present embodiment, the **error distribution** window is composed of 4 pixels, but there may naturally be employed a larger or...

...easily adapted to the recording with multi-value data corresponding to a larger number of **gradation** levels, merely by expanding the **error distribution** table. Consequently it is adaptable to various multi-value recording methods such as recording with multiple droplets, recording with **inks** of a same hue with **different densities** or recording with discharge amount modulation employing dots of different discharge amounts, by the simple expansion of the **error distribution** table. Furthermore, though the present embodiment merely defines the 8-bit multi-value image data, there can be naturally provided a **color** image processing apparatus capable of receiving **color** multi-value image data of N bits for each of R, G and B components...

20/3,K/5 (Item 5 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00843373
Ink jet printer
Tintenstrahldrucker
Imprimante a jet d'encre
PATENT ASSIGNEE:
MITSUBISHI DENKI KABUSHIKI KAISHA, (208580), 2-3, Marunouchi 2-chome Chiyoda-ku, Tokyo 100, (JP), (Proprietor designated states: all)
INVENTOR:
Koike, Keiichi, c/o Mitsubishi Denki K.K., 2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100, (JP)
Yamada, Keiki, c/o Mitsubishi Denki K.K., 2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100, (JP)
Katoh, Masatoshi, c/o Mitsubishi Denki K.K., 2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100, (JP)
Ohnishi, Masaru, c/o Mitsubishi Denki K.K., 2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100, (JP)
LEGAL REPRESENTATIVE:
Ritter und Edler von Fischern, Bernhard, Dipl.-Ing. et al (9672), Hoffmann Eitle, Patent- und Rechtsanwalte, Arabellastrasse 4, 81925 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 779159 A2 970618 (Basic)
EP 779159 A3 980610
EP 779159 B1 020320
APPLICATION (CC, No, Date): EP 96119969 961212;
PRIORITY (CC, No, Date): JP 95325594 951214
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **B41J-002/21**
ABSTRACT WORD COUNT: 88
NOTE:
Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB97	885
CLAIMS B	(English)	200212	634
CLAIMS B	(German)	200212	520
CLAIMS B	(French)	200212	736
SPEC A	(English)	EPAB97	14808
SPEC B	(English)	200212	14415
Total word count - document A			15696
Total word count - document B			16305
Total word count - documents A + B			32001

INTERNATIONAL PATENT CLASS: **B41J-002/21**

...SPECIFICATION a printed image with many gradation levels. The digital halftoning processing includes ordered dither processing, **error diffusion** processing, and dot pattern processing. In this Embodiment 4 of carrying out the present invention...

...processing, and next description is made for operations in the processing. A plurality types of **ink** each having a **different density** are filled in the three **ink** jet heads (described head hereinafter) 2a, 2b, 2c. When an image signal is inputted, the...

...subjects the image signal to a multi-level dither processing to covert it to a **gradation** signal, and outputs the **gradation** signal. Herein the image signal is defined as expression of a density data for each **pixel** constituting an image with digital data, and the **gradation** signal expresses a printing level obtained for one **dot** on the receiving medium 9. When the **gradation** signal is inputted into the control section 1, the control section 1 generates the driving...

...6c for the heads 2a, 2b, 2c in response to a signal level for each **pixel** constituting the image, and outputs the driving signals to the heads 2a, 2b, 2c. The...processing for printing. As the digital halftoning processing, there are available the ordered dither processing, **error diffusion** processing, and dot pattern processing, but in the Embodiment 5 of carrying out the present...

...that description is made for operations in the ordered dither processing below. A plurality of **ink** each having a **different density** are filled in the three **ink** jet heads (called head hereinafter) 2a, 2b, 2c. When an image signal is inputted, the...

...with a density value less than the threshold value, and gives data specifying whether a **dot** is formed to the **pixel** or not as a **gradation** signal. "1" is outputted when a **dot** is formed, and "0" when a **dot** is not formed. To a signal with a density value larger than the threshold value, the dither processing section 22 outputs the image signal as it is as a **gradation** signal. When the **gradation** signal is inputted into the control section 1, the control section 1 generates driving signals 6a, 6b, 6c for the heads 2a, 2b, 2c for ejecting **ink** in response to a signal level for each **pixel** constituting an image, and outputs the driving signals to the heads 2a, 2b, 2c. The...

...SPECIFICATION to obtain a high quality image.

In a case where a number of types of **ink** is small, input image signal is subjected to digital halftoning processing to obtain a printed image with many **gradation** levels. The digital halftoning processing includes

ordered dither processing, **error diffusion** processing, and dot pattern processing. In this Embodiment 4, the ordered dither processing is executed...

...processing, and next description is made for operations in the processing. A plurality types of **ink** each having a **different density** are filled in the three **ink** jet heads (described head hereinafter) 2a, 2b, 2c. When an image signal is inputted, the...

...subjects the image signal to a multi-level dither processing to covert it to a **gradation** signal, and outputs the **gradation** signal. Herein the image signal is defined as expression of a density data for each **pixel** constituting an image with digital data, and the **gradation** signal expresses a printing level obtained for one **dot** on the receiving medium 9. When the **gradation** signal is inputted into the control section 1, the control section 1 generates the driving...
...6c for the heads 2a, 2b, 2c in response to a signal level for each **pixel** constituting the image, and outputs the driving signals to the heads 2a, 2b, 2c. The...processing for printing. As the digital halftoning processing, there are available the ordered dither processing, **error diffusion** processing, and dot pattern processing, but in the Embodiment 5 of carrying out the present...

...that description is made for operations in the ordered dither processing below. A plurality of **inks** each having a **different density** are filled in the three **ink** jet heads (called head hereinafter) 2a, 2b, 2c. When an image signal is inputted, the...

...with a density value less than the threshold value, and gives data specifying whether a **dot** is formed to the **pixel** or not as a **gradation** signal. "1" is outputted when a **dot** is formed, and "0" when a **dot** is not formed. To a signal with a density value larger than the threshold value, the dither processing section 22 outputs the image signal as it is as a **gradation** signal. When the **gradation** signal is inputted into the control section 1, the control section 1 generates driving signals 6a, 6b, 6c for the heads 2a, 2b, 2c for ejecting **ink** in response to a signal level for each **pixel** constituting an image, and outputs the driving signals to the heads 2a, 2b, 2c. The...

20/3,K/6 (Item 6 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00826543
Image processing method and image processing apparatus
Bildverarbeitungsverfahren und -gerat
Procede et appareil de traitement d'images
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730008), 4-1, Nishi-Shinjuku 2-chome, Shinjuku-ku, Tokyo, (JP), (Proprietor designated states: all)
INVENTOR:
Kakutani, Toshiaki, c/o Seiko Epson Corp., 3-5 Owa, 3-chome, Suwa-shi, Nagano, (JP)
LEGAL REPRESENTATIVE:
Sturt, Clifford Mark et al (50502), Miller Sturt Kenyon 9 John Street, London WC1N 2ES, (GB)
PATENT (CC, No, Kind, Date): EP 767580 A2 970409 (Basic)
EP 767580 A3 990317
EP 767580 B1 030402

APPLICATION (CC, No, Date): EP 96307243 961003;
PRIORITY (CC, No, Date): JP 95260582 951006; JP 96161282 960621
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **H04N-001/405**
ABSTRACT WORD COUNT: 174
NOTE:
Figure number on first page: 4

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB97	1171
CLAIMS B	(English)	200314	1401
CLAIMS B	(German)	200314	1184
CLAIMS B	(French)	200314	1595
SPEC A	(English)	EPAB97	6017
SPEC B	(English)	200314	6707
Total word count - document A			7189
Total word count - document B			10887
Total word count - documents A + B			18076

INTERNATIONAL PATENT CLASS: **H04N-001/405**

...SPECIFICATION evaluation value "on(underscore)value(Data)" becomes. As a consequence, the quantizing error in the **error diffusion** method can be controlled so as to become the optimum value, depending on the gradient value of the input image data, in various density regions whose **ink density** is **different** from each other, such as the low density region where the respective **ink** dots are independently present, and the high density region where the adjoining **ink** dots are located very close to the neighbor **ink dot** , or are superimposed with each other. For example, the smaller the **gradation** value becomes, the larger the quantizing error when the **dot** ON becomes, so that another **dot** ON can be hardly produced. As a result, very fine changes in **gradation** can be obtained, namely the smooth and continuous **gradation** characteristic can be obtained. Even when the gamma correction is carried out before the **error diffusion** process, since the **gradation** characteristic of the low density region becomes smooth and continuous, it is possible to prevent the quasi-contour from being produced. Moreover, the changing operation of the evaluation in the **error diffusion** method can be realized by employing a relatively simple arrangement, and the processing speed thereof...

...SPECIFICATION in the calculation of the quantizing error in such a way that the smaller the **gradation** value "Data" of the multi- **gradation** image data becomes, the larger the evaluation value "on(underscore)value(Data)" becomes. As a consequence, the quantizing error in the **error diffusion** method can be controlled so as to become the optimum value, depending on the gradient value of the input image data, in various density regions whose **ink density** is **differ**ent from each other, such as the low density region where the respective **ink** dots are independently present, and the high density region where the adjoining **ink** dots are located very close to the neighbor **ink dot** , or are superimposed with each other. For example, the smaller the **gradation** value becomes, the larger the quantizing error when the **dot** ON becomes, so that another **dot** ON can be hardly produced. As a result, very fine changes in **gradation** can be obtained, namely the smooth and continuous **gradation** characteristic can be obtained. Even when the gamma correction is carried out before the **error diffusion** process, since the **gradation** characteristic of the low density region becomes

smooth and continuous, it is possible to prevent the quasi-contour from being produced. Moreover, the changing operation of the evaluation in the **error diffusion** method can be realized by employing a relatively simple arrangement, and the processing speed thereof...

20/3,K/7 (Item 7 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS
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00811067

Color image printing system capable of correcting density-deviation on image and system for detecting color-deviation on image

Farbbilddrucksystem mit Korrektur von Dichteabweichungen im Bild und System zur Detektion von Farbabweichungen im Bild

Systeme d'impression d'images en couleurs apte a corriger des deviations de densite dans l'image et systeme de detection des deviations de couleurs dans l'image

PATENT ASSIGNEE:
KABUSHIKI KAISHA TOSHIBA, (213130), 72, Horikawa-cho, Saiwai-ku, Kawasaki-shi, Kanagawa-ken 210-8572, (JP), (Proprietor designated states: all)
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Yamamoto, Naofumi, 303, Riri Heights, 1334, Higashi-Naganuma, Inagi-shi, Tokyo-to, (JP)
Sekizawa, Hidekazu, 47-16, Enokigaoka, Aoba-ku, Yokohama-shi, Kanagawa-ken, (JP)
LEGAL REPRESENTATIVE:
Zangs, Rainer E., Dipl.-Ing. et al (72561), Hoffmann Eitle, Patent- und Rechtsanwalte, Arabellastrasse 4, 81925 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 753959 A2 970115 (Basic)
EP 753959 A3 980128
EP 753959 B1 021016
APPLICATION (CC, No, Date): EP 96111381 960715;
PRIORITY (CC, No, Date): JP 95178991 950714; JP 95195258 950731
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **H04N-001/401** ; **H04N-001/50**
ABSTRACT WORD COUNT: 339
NOTE:
Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB97	927
CLAIMS B	(English)	200242	733
CLAIMS B	(German)	200242	586
CLAIMS B	(French)	200242	902
SPEC A	(English)	EPAB97	22308
SPEC B	(English)	200242	19157
Total word count - document A			23239
Total word count - document B			21378
Total word count - documents A + B			44617

INTERNATIONAL PATENT CLASS: **H04N-001/401** ...

... **H04N-001/50**

...SPECIFICATION expressed in the ratio of the black picture elements in the recorded image by the **error diffusion** method or the dither method, or in a binary image of a thin line and...

...SPECIFICATION expressed in the ratio of the black picture elements in the recorded image by the **error diffusion** method or the dither method, or in a binary image of a thin line and...

20/3,K/8 (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00721675
Multilevel halftoning using a randomised Bayer matrix
Mehrstufige Halbtonrasterung mit Verwendung einer zufallerzeugten Bayer-Matrix
Obtention de demi-teintes a niveaux multiples a l'aide d'une matrice Bayer rendue aleatoire
PATENT ASSIGNEE:
AGFA-GEVAERT N.V., (200390), Septestraat 27, 2640 Mortsel, (BE), (Proprietor designated states: all)
INVENTOR:
Deschuytere, Frank, c/o Agfa-Gevaert n. v., DIE 3800, Septestraat 27, B-2640 Mortsel, (BE)
PATENT (CC, No, Kind, Date): EP 682438 A1 951115 (Basic)
EP 682438 B1 000531
APPLICATION (CC, No, Date): EP 95200812 950331;
PRIORITY (CC, No, Date): EP 94201330 940511
DESIGNATED STATES: BE; DE; FR; GB; NL
INTERNATIONAL PATENT CLASS: **H04N-001/40**
ABSTRACT WORD COUNT: 137
NOTE:
Figure number on first page: NONE

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200022	445
CLAIMS B	(German)	200022	412
CLAIMS B	(French)	200022	487
SPEC B	(English)	200022	5490
Total word count - document A			0
Total word count - document B			6834
Total word count - documents A + B			6834

INTERNATIONAL PATENT CLASS: **H04N-001/40**

20/3,K/9 (Item 9 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00718606
Printer with optical feedback.
Drucker mit optischen Ruckkopplung.
Imprimante avec boucle de retour optique.
PATENT ASSIGNEE:
INTERNATIONAL BUSINESS MACHINES CORPORATION, (200123), , Armonk, NY 10504, (US), (applicant designated states: DE;FR;GB)
INVENTOR:
Edgar, Albert Durr, 3912 Eton Lane, Austin, Texas 78727, (US)
LEGAL REPRESENTATIVE:

Williams, Julian David (75461), IBM United Kingdom Limited, Intellectual Property Department, Hursley Park, Winchester, Hampshire SO21 2JN, (GB)
PATENT (CC, No, Kind, Date): EP 680198 A2 951102 (Basic)
EP 680198 A3 960612
APPLICATION (CC, No, Date): EP 95302342 950407;
PRIORITY (CC, No, Date): US 235847 940429
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **H04N-001/60** ; **H04N-001/40**
ABSTRACT WORD COUNT: 177

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB95	988
SPEC A	(English)	EPAB95	5947
Total word count - document A			6935
Total word count - document B			0
Total word count - documents A + B			6935

INTERNATIONAL PATENT CLASS: **H04N-001/60** ...

... **H04N-001/40**

...SPECIFICATION diffusion gives the appearance of a full gray scale by varying the ratio of dark **pixels** , like a Monet painting. Based on the desired image, a calculation is made to determine...

...paper. The desired density of the real image is compared to estimated density of the **ink** on the paper if the **ink** was fired at that location. When the inkjet nozzle is fired, the realized **density** **varies** widely from the precalculated expected density as shown by the horizontal streaks in FIG. 1...

20/3,K/10 (Item 10 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00697928
Image processing method and apparatus
Bildverarbeitungsverfahren und -gerat
Procede et appareil de traitement d'images
PATENT ASSIGNEE:
CANON KABUSHIKI KAISHA, (542361), 30-2, 3-chome, Shimomaruko, Ohta-ku, Tokyo, (JP), (Proprietor designated states: all)
INVENTOR:
Ohta, Takatoshi, c/o Canon Kabushiki Kaisha, 30-2, 3-chome, Shimomaruko, Ohta-ku, Tokyo, (JP)
Yamada, Koji, c/o Canon Kabushiki Kaisha, 30-2, 3-chome, Shimomaruko, Ohta-ku, Tokyo, (JP)
LEGAL REPRESENTATIVE:
Beresford, Keith Denis Lewis et al (28273), BERESFORD & Co. High Holborn 2-5 Warwick Court, London WC1R 5DJ, (GB)
PATENT (CC, No, Kind, Date): EP 664643 A2 950726 (Basic)
EP 664643 A3 951206
EP 664643 B1 000412
APPLICATION (CC, No, Date): EP 95300317 950119;
PRIORITY (CC, No, Date): JP 944647 940120; JP 94162094 940714
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; NL; PT; SE

INTERNATIONAL PATENT CLASS: **H04N-001/405**
ABSTRACT WORD COUNT: 92
NOTE:
Figure number on first page: 4A 4B

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200015	754
CLAIMS B	(German)	200015	660
CLAIMS B	(French)	200015	823
SPEC B	(English)	200015	6063
Total word count - document A			0
Total word count - document B			8300
Total word count - documents A + B			8300

INTERNATIONAL PATENT CLASS: **H04N-001/405**

...SPECIFICATION quantizing input multi-value data to data of three levels or more by using an **error diffusion** method is also known. In case of using such a method in an **ink** jet printer or the like which expresses a pseudo **gradation** by using a plurality of **inks** having the same hue and **different densities** , as shown in Fig. 6, it is necessary that the input image data is once...

...look-up tables (LUTs) 15-0, 15-1, ..., and 15-N corresponding to the respective **inks** and the densities are corrected and, after that, the data is inputted to binary processing circuits 16-0, 16-1, ..., 16-N and a binarization process is executed to each **ink** . There is, consequently, a drawback such that when the number of kinds of **inks** increases, an amount of processes increases by an amount corresponding to the number of **inks** and the processing circuit is also enlarged in proportion to it. Further, there is a...

...drawback in case of using those methods in recording means having the same kind of **ink** and a resolution of (N) times in the main scanning direction, recording means having the same resolution for recording twice at the same **dot** recording position, further, a multi-droplet method of recording by changing the **dot** diameter of the **ink** , or the like.

SUMMARY OF THE INVENTION

The present invention intends to reduce the above...can be improved.

(Fourth embodiment)

Fig. 10 is a diagram for explaining in detail the **error distribution** table 108 according to the fourth embodiment of the invention. In the fourth embodiment, a...

...and 7B of the third embodiment except a different point that the contents of the **error distribution** table and those of recording means are different. That is, in the third embodiment, the recording means for recording by using two kinds of dark and light **inks** having **different densities** has been presumed. In the fourth embodiment, recording means using the same kind of **ink** and having a resolution of (N) time (N = 2 in the second embodiment) in the...

...direction or recording means having the same resolution and for recording twice at the same **dot** recording position is presumed. Therefore, the binary data table annexed to the **error distribution** table of Fig. 10 is constructed so that both of the outputs o0 and o1...

20/3,K/11 (Item 11 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00544354
Method of changing a color in an image
Verfahren zur Abanderung der Farben eines Bildes
Procede de modification des couleurs d'une image
PATENT ASSIGNEE:
XEROX CORPORATION, (219783), Xerox Square, Rochester New York 14644, (US)
, (applicant designated states: DE;FR;GB)
INVENTOR:
Bollmann, James E., 3323 Eaton Road, Williamson, New York 14589, (US)
Venable, Dennis L., 55 Academy Drive, Rochester, New York 14623, (US)
LEGAL REPRESENTATIVE:
Johnson, Reginald George et al (32372), Rank Xerox Ltd Patent Department
Parkway, Marlow Buckinghamshire SL7 1YL, (GB)
PATENT (CC, No, Kind, Date): EP 535931 A2 930407 (Basic)
EP 535931 A3 930707
EP 535931 B1 970528
APPLICATION (CC, No, Date): EP 92308912 920930;
PRIORITY (CC, No, Date): US 769683 911002
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **H04N-001/46**
ABSTRACT WORD COUNT: 157

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPAB97	1047
CLAIMS B	(German)	EPAB97	927
CLAIMS B	(French)	EPAB97	1293
SPEC B	(English)	EPAB97	3954
Total word count - document A			0
Total word count - document B			7221
Total word count - documents A + B			7221

INTERNATIONAL PATENT CLASS: **H04N-001/46**

...SPECIFICATION of products, produced by Apple Corporation of Cupertino, CA.

In an example system for editing **color** images, **color** images are provided at 2563)) **different density** levels. This number of levels is generally considered too complex to easily deal with. It is preferable therefore to provide a simple method of handling data, utilizing a reduced **color** set, representative of the **color** used in the original image. With reference to Figure 1, at a first step 10 to producing an approximation or representative reduced number **color** set, each separation is handled separately from its complements. Using the red separation, labeled RED...

...The number of levels chosen for each separation now represent the full range of each **color** , albeit with more widely spaced intervals. The number of levels retained is selected based upon experimentation to determine a number of levels that produce an aesthetically pleasing reduced **color** set for display purposes. It is, of course, important that the reduced **color** set to be produced have an appearance close to the original image, or **color** modification will have no value. Since a simple threshold application, which could be used, will...

...and/or error conversion methods are known for this purpose. The well-known Floyd-Steinberg **Error Diffusion** Algorithm (1976), or one of many derivative **error diffusion** methods, distribute the difference error derived in the encoding arrangement over adjacent **pixels** for image smoothing. It has been determined that the number of levels Nx)), of each **color** for a set which suitably approximates the original **color** image is approximately 4 red levels (NR))), 8 green levels (NG))), 3 blue levels (NB...
...schemes are possible and depend for their desirability on the user's perception of the **color** accuracy of such approximations. In this process, black images must be converted to r, g...

20/3,K/12 (Item 12 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00521582
Bi-level image display signal processing apparatus
Gerat zur Verarbeitung von Signalen fur die Anzeige von Bildern mit zwei Pegeln
Appareil de traitement de signaux pour la visualisation d'images a deux niveaux
PATENT ASSIGNEE:
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216883), 1006, Oaza Kadoma, Kadoma-shi, Osaka-fu, 571, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
Nakazato, Katsuo, 2-16-19, Naka Ochiai, Shinjuku-ku, Tokyo, (JP)
Kurosawa, Toshiharu, Tokiwadai 283, Hodogaya-ku, Yokohama, (JP)
Maruyama, Yuji, 153-2, Yanokuchi, Inagi-shi, Tokyo, (JP)
Takahashi, Kiyoshi, 6-5-1, Chiyogaoka, As0-ku, Kawasaki, (JP)
Tsuchiya, Hiroyoshi, 399, Aza Touya-cho, Touya-mura,, Abuta-gun, Hokkaido , (JP)
LEGAL REPRESENTATIVE:
Senior, Alan Murray et al (35712), J.A. KEMP & CO., 14 South Square, Gray's Inn, London WC1R 5LX, (GB)
PATENT (CC, No, Kind, Date): EP 507356 A2 921007 (Basic)
EP 507356 A3 930714
EP 507356 B1 970226
APPLICATION (CC, No, Date): EP 92110386 871218;
PRIORITY (CC, No, Date): JP 86304249 861219; JP 86304198 861219; JP 86304243 861219; JP 86304248 861219; JP 87175171 870714; JP 8745577 870227
DESIGNATED STATES: DE; FR; GB
RELATED PARENT NUMBER(S) - PN (AN):
EP 272147 (EP 873112056)
INTERNATIONAL PATENT CLASS: **H04N-001/40**
ABSTRACT WORD COUNT: 136

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	395
CLAIMS B	(English)	EPAB97	490
CLAIMS B	(German)	EPAB97	389
CLAIMS B	(French)	EPAB97	566
SPEC A	(English)	EPABF1	3777
SPEC B	(English)	EPAB97	3812

Total word count - document A 4172
Total word count - document B 5257
Total word count - documents A + B 9429

INTERNATIONAL PATENT CLASS: **H04N-001/40**

...SPECIFICATION in that processing which have been obtained beforehand during processing of preceding picture elements.
The **error diffusion** method is superior to the dither method with regard to image resolution and the reproduction characteristic for a step **gradation** source image, and enables the degree of generation of moire patterns to be made very...

...However in the case of reproduction of an image which has only small amounts of **changes** in **density** , such as a computer-generated image having areas of extremely uniform density, the **error diffusion** method produces regions of texture in the reproduced image. This texture is inherent to the **error diffusion** method, and for this reason the **error diffusion** method has not been widely adopted. The reason for generation of this texture is that a fixed relationship is continuously maintained between an object **picture element** and the aforementioned set of picture elements which are disposed peripherally adjacent to the object **picture element** , and fixed values are also maintained for the respective proportions by which the bi-level conversion error of the object **picture element** is apportioned among these peripheral picture elements.
Furthermore, if it is attempted to produce a...

...SPECIFICATION in that processing which have been obtained beforehand during processing of preceding picture elements.
The **error diffusion** method is superior to the dither method with regard to image resolution and the reproduction characteristic for a step **gradation** source image, and enables the degree of generation of moire patterns to be made very...

...However in the case of reproduction of an image which has only small amounts of **changes** in **density** , such as a computer-generated image having areas of extremely uniform density, the **error diffusion** method produces regions of texture in the reproduced image. This texture is inherent to the **error diffusion** method, and for this reason the **error diffusion** method has not been widely adopted. The reason for generation of this texture is that a fixed relationship is continuously maintained between an object **picture element** and the aforementioned set of picture elements which are disposed peripherally adjacent to the object **picture element** , and fixed values are also maintained for the respective proportions by which the bi-level conversion error of the object **picture element** is apportioned among these peripheral picture elements.
Furthermore, if it is attempted to produce a...

20/3,K/13 (Item 13 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00521552
Bi-level image display signal processing apparatus
Gerat zur Verarbeitung von Signalen fur die Anzeige von Bildern mit zwei Pegeln
Appareil de traitement de signaux pour la visualisation d'images a deux

niveaux

PATENT ASSIGNEE:
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216883), 1006, Oaza Kadoma, Kadoma-shi, Osaka-fu, 571, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
Nakazato, Katsuo, 2-16-19, Naka Ochiai, Shinjuku-ku, Tokyo, (JP)
Kurosawa, Toshiharu, Tokiwadai 283 Hodogaya-ku, Yokohama, (JP)
Maruyama, Yuji, 153-2, Yanokuchi, Inagi-shi, Tokyo, (JP)
Takahashi, Kiyoshi, 6-5-1, Chiyogaoka, Aso-ku, Kawasaki, (JP)
Tsuchiya, Hiroyoshi, 399,Aza Touya-cho Touya-mura, Abuta-gu Hokkaido, (JP)
LEGAL REPRESENTATIVE:
Senior, Alan Murray et al (35712), J.A. KEMP & CO., 14 South Square, Gray's Inn, London WC1R 5LX, (GB)
PATENT (CC, No, Kind, Date): EP 512578 A2 921111 (Basic)
EP 512578 A3 930714
EP 512578 B1 961120
APPLICATION (CC, No, Date): EP 92110355 871218;
PRIORITY (CC, No, Date): JP 86304249 861219; JP 86304198 861219; JP 86304243 861219; JP 87175171 870714; JP 8745577 870227; JP 86304248 861219
DESIGNATED STATES: DE; FR; GB
RELATED PARENT NUMBER(S) - PN (AN):
EP 272147 (EP 873112056)
INTERNATIONAL PATENT CLASS: **H04N-001/40**
ABSTRACT WORD COUNT: 136

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	617
CLAIMS B	(English)	EPAB96	622
CLAIMS B	(German)	EPAB96	514
CLAIMS B	(French)	EPAB96	734
SPEC A	(English)	EPABF1	11126
SPEC B	(English)	EPAB96	11125
Total word count - document A			11744
Total word count - document B			12995
Total word count - documents A + B			24739

INTERNATIONAL PATENT CLASS: **H04N-001/40**

...SPECIFICATION in that processing which have been obtained beforehand during processing of preceding picture elements.

The **error diffusion** method is superior to the dither method with regard to image resolution and the reproduction characteristic for a step **gradation** source image, and enables the degree of generation of moire patterns to be made very...

...However in the case of reproduction of an image which has only small amounts of **changes** in **density** , such as a computer-generated image having areas of extremely uniform density, the **error diffusion** method produces regions of texture in the reproduced image. This texture is inherent to the **error diffusion** method, and for this reason the **error diffusion** method has not been widely adopted. The reason for generation of this texture is that a fixed relationship is continuously maintained between an object **picture element** and the aforementioned set of picture elements which are disposed peripherally adjacent to the object **picture element** , and fixed values are also maintained for the

respective proportions by which the bi-level conversion error of the object **picture element** is apportioned among these peripheral picture elements.

Furthermore, if it is attempted to produce a...

...SPECIFICATION in that processing which have been obtained beforehand during processing of preceding picture elements.

The **error diffusion** method is superior to the dither method with regard to image resolution and the reproduction characteristic for a step **gradation** source image, and enables the degree of generation of moire patterns to be made very...

...However in the case of reproduction of an image which has only small amounts of **changes** in **density** , such as a computer-generated image having areas of extremely uniform density, the **error diffusion** method produces regions of texture in the reproduced image. This texture is inherent to the **error diffusion** method, and for this reason the **error diffusion** method has not been widely adopted. The reason for generation of this texture is that a fixed relationship is continuously maintained between an object **picture element** and the aforementioned set of picture elements which are disposed peripherally adjacent to the object **picture element** , and fixed values are also maintained for the respective proportions by which the bi-level conversion error of the object **picture element** is apportioned among these peripheral picture elements.

Furthermore, if it is attempted to produce a...

20/3,K/14 (Item 14 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00521233

Bi-level image display signal processing apparatus

Gerat zur Verarbeitung von Signalen fur die Anzeige von Bildern mit zwei Pegeln

Appareil de traitement de signaux pour la visualisation d'images a deux niveaux

PATENT ASSIGNEE:
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216883), 1006, Oaza Kadoma, Kadoma-shi, Osaka-fu, 571, (JP), (applicant designated states: DE;FR;GB)

INVENTOR:
Nakazato, Katsuo, 2-16-19, Naka Ochiai, Shinjuku-ku, Tokyo, (JP)
Kurosawa, Toshiharu, Tokiwadai 283, Hodogaya-ku, Yokohama, (JP)
Maruyama, Yuji, 153-2, Yanokuchi, Inagi-shi, Tokyo, (JP)
Takahashi, Kiyoshi, 6-5-1, Chiyogaoka, Aso-ku, Kawasaki, (JP)
Tsuchiya, Hiroyoshi, 2-7-18, Ikuta, Tama-ku, Kawasaki, (JP)

LEGAL REPRESENTATIVE:
Senior, Alan Murray et al (35712), J.A. KEMP & CO., 14 South Square, Gray's Inn, London WC1R 5LX, (GB)

PATENT (CC, No, Kind, Date): EP 507354 A2 921007 (Basic)
EP 507354 A3 930714
EP 507354 B1 960918

APPLICATION (CC, No, Date): EP 92110032 871218;

PRIORITY (CC, No, Date): JP 86304249 861219; JP 86304198 861219; JP 86304243 861219; JP 87175171 870714; JP 8745577 870227; JP 86304248 861219

DESIGNATED STATES: DE; FR; GB

RELATED PARENT NUMBER(S) - PN (AN):

EP 272147 (EP 873112056)
INTERNATIONAL PATENT CLASS: **H04N-001/40**
ABSTRACT WORD COUNT: 136

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	460
CLAIMS B	(English)	EPAB96	460
CLAIMS B	(German)	EPAB96	369
CLAIMS B	(French)	EPAB96	549
SPEC A	(English)	EPABF1	3479
SPEC B	(English)	EPAB96	3490
Total word count - document A			3939
Total word count - document B			4868
Total word count - documents A + B			8807

INTERNATIONAL PATENT CLASS: **H04N-001/40**

...SPECIFICATION in that processing which have been obtained beforehand during processing of preceding picture elements.
The **error diffusion** method is superior to the dither method with regard to image resolution and the reproduction characteristic for a step **gradation** source image, and enables the degree of generation of moire patterns to be made very...

...However in the case of reproduction of an image which has only small amounts of **changes** in **density** , such as a computer-generated image having areas of extremely uniform density, the **error diffusion** method produces regions of texture in the reproduced image. This texture is inherent to the **error diffusion** method, and for this reason the **error diffusion** method has not been widely adopted. The reason for generation of this texture is that a fixed relationship is continuously maintained between an object **picture element** and the aforementioned set of picture elements which are disposed peripherally adjacent to the object **picture element** , and fixed values are also maintained for the respective proportions by which the bi-level conversion error of the object **picture element** is apportioned among these peripheral picture elements.
Furthermore, if it is attempted to produce a...

...SPECIFICATION in that processing which have been obtained beforehand during processing of preceding picture elements.
The **error diffusion** method is superior to the dither method with regard to image resolution and the reproduction characteristic for a step **gradation** source image, and enables the degree of generation of moire patterns to be made very...

...However in the case of reproduction of an image which has only small amounts of **changes** in **density** , such as a computer-generated image having areas of extremely uniform density, the **error diffusion** method produces regions of texture in the reproduced image. This texture is inherent to the **error diffusion** method, and for this reason the **error diffusion** method has not been widely adopted. The reason for generation of this texture is that a fixed relationship is continuously maintained between an object **picture element** and the aforementioned set of picture elements which are disposed peripherally adjacent to the object **picture element** , and fixed values are also maintained for the respective proportions by which the bi-level conversion error of the object **picture element** is apportioned among these peripheral picture

elements.
Furthermore, if it is attempted to produce a...

20/3,K/15 (Item 15 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00516350
Image forming apparatus provided with post-processing device.
Bilderzeuger mit Nachbearbeitungsgerat.
Appareil de formation d'images avec un dispositif de post-traitement.
PATENT ASSIGNEE:
SHARP KABUSHIKI KAISHA, (260710), 22-22 Nagaike-cho Abeno-ku, Osaka 545, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
Nakai, Yasuhiro, 2-106 Hishida-Miyanishi, Seika-cho, Soraku-gun, Kyoto-fu , (JP)
Yoshiura, Shoichiro, Yamato-Ryo-Nishikan, 492 Minosho-cho, Yamato-Koriyama-shi, Nara-ken, (JP)
LEGAL REPRESENTATIVE:
TER MEER - MULLER - STEINMEISTER & PARTNER (100061), Mauerkircherstrasse 45, D-81679 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 505968 A2 920930 (Basic)
EP 505968 A3 930127
EP 505968 B1 940622
APPLICATION (CC, No, Date): EP 92104998 920323;
PRIORITY (CC, No, Date): JP 91166774 910329
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G03G-015/00; **H04N-001/387**
ABSTRACT WORD COUNT: 170

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	664
CLAIMS B	(German)	EPBBF1	606
CLAIMS B	(French)	EPBBF1	790
SPEC B	(English)	EPBBF1	7319
Total word count - document A			0
Total word count - document B			9379
Total word count - documents A + B			9379

...INTERNATIONAL PATENT CLASS: **H04N-001/387**

...SPECIFICATION with a processing of the image data.
The multiple-value processing sections 71a and 71b **serve to** convert the binary data output from the error diffusing processing section 70c into 256- **tone** data again. The synthesizing section 71c serves to selectively perform a logical operation such as...
...in the memory 73 or the bit data output from a pattern generator (PG). The **density** converting processing section **71d** functions as establishing a proper relation between an input density and an output density of the 256- **tone** digital signal by referring to a predetermined **tone** converting table. The magnification changing processing section 71e serves to perform the interpolation of the...

...according to a predetermined magnification data and derive a density value corresponding to the interpolated **pixel** . The magnification changing processing section 71e changes the magnification of the sub scan

and then...

...scan. The image processing section 71f serves to perform various image treatments of the input **pixel** data and collect the information about the data row such as an abstraction of the...

20/3,K/16 (Item 16 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00273684
Bi-level image display signal processing apparatus
Gerat zur Verarbeitung von Signalen fur die Anzeige von Bildern mit zwei Pegeln
Appareil de traitement de signaux pour la visualisation d'images a deux niveaux
PATENT ASSIGNEE:
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216883), 1006, Oaza Kadoma, Kadoma-shi, Osaka-fu, 571, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
Nakazato, Katsuo, 2-16-19, Naka Ochiai, Shinjuku-ku Tokyo, (JP)
Kurosawa, Toshiharu, Tokiwadai 283 Hodogaya-ku, Yokohama, (JP)
Maruyama, Yuji, 153-2, Yanokuchi, Inagi-shi Tokyo, (JP)
Takahashi, Kiyoshi, 6-5-1, Chiyogaoka Aso-ku, Kawasaki, (JP)
Tsuchiya, Hiroyoshi, 2-7-18, Ikuta Tama-ku, Kawasaki, (JP)
LEGAL REPRESENTATIVE:
Senior, Alan Murray et al (35712), J.A. KEMP & CO., 14 South Square, Gray's Inn, London WC1R 5LX, (GB)
PATENT (CC, No, Kind, Date): EP 272147 A2 880622 (Basic)
EP 272147 A3 891025
EP 272147 B1 930421
APPLICATION (CC, No, Date): EP 87311205 871218;
PRIORITY (CC, No, Date): JP 86304249 861219; JP 86304198 861219; JP 86304243 861219; JP 87175171 870714; JP 8745577 870227; JP 86304248 861219
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **H04N-001/40**
ABSTRACT WORD COUNT: 133

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPAB96	521
CLAIMS B	(German)	EPAB96	411
CLAIMS B	(French)	EPAB96	593
SPEC B	(English)	EPAB96	6984
Total word count - document A			0
Total word count - document B			8509
Total word count - documents A + B			8509

INTERNATIONAL PATENT CLASS: **H04N-001/40**
...SPECIFICATION in that processing which have been obtained beforehand during processing of preceding picture elements.
The **error diffusion** method is superior to the dither method with regard **to image** resolution and the reproduction characteristic for a step **gradation** source image, and enables the degree of generation of moire **patterns** to be made very small even when a printed image is being reproduced. However in the case of reproduction of an image which has

only small amounts of **changes** in **density** , such as a computer-generated image having areas **of** extremely **uniform density** , the **error diffusion** method produces regions of texture in the reproduced image. **This texture** is inherent to the **error diffusion** method, and for this reason the **error diffusion** method **has not** been widely adopted. The reason for **generation of** this texture is that a fixed relationship is continuously maintained between an object **picture element** and the aforementioned set of picture elements which are **disposed peripherally** adjacent to the object **picture element** , and fixed values are also maintained for the respective **proportions by** which the bi-level conversion error of the object **picture element** is apportioned among these peripheral picture elements.

Furthermore, if **it is** attempted to produce a practical type of digital computation processing circuit for implementing this prior... 208a) the apportionment value H(sub(A)) to the accumulated error S'(sub(A)) corresponding **to the picture element** position A, which has been derived in a previously executed picture element processing operation and...a sync signal (synchronized with successive picture element processing operations, as described for the first **embodiment**) **to** receive the error apportionment values G(sub(A)) to G(**sub** (D)) from the error apportionment value computation section 110 and the residual error J(sub...D)), and outputs these error apportionment values to the error updating section 112 and the **residual error** computation section 113.

The residual error computation section 113 computes the residual error J(sub...A)) to K(sub(D)) to the apportionment value computation section 114, for apportioning the **bi** -level error E(sub(xyu)) among these picture elements A to D within the peripheral...of read-out access corresponding to the picture element position A and write-in access **corresponding** to the picture element position B, so that a practical apparatus can be easily implemented...

20/3,K/17 (Item 17 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00271751
Apparatus for processing image signal.
Bildsignalverarbeitungsgerat.
Appareil de traitement de signaux d'images.
PATENT ASSIGNEE:
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216883), 1006, Oaza Kadoma, Kadoma-shi, Osaka-fu, 571, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
Nakazato, Katsuo, 2-16-19, Naka Ochiai Shinjuku-ku, Tokyo, (JP)
Tsuchiya, Hiroyoshi, 2-7-18 Ikuta Tama-ku, Kawasaki, (JP)
Kurosawa, Toshiharu, 283, Tokiwadai Hodogaya-ku, Yokohama, (JP)
Maruyama, Yuji, 153-2, Yanokuchi, Inagi-shi Tokyo, (JP)
1Takahashi, Kiyoshi, 6-5-1, Chiyogaoka Aso-ku, Kawasaki, (JP)
LEGAL REPRESENTATIVE:
Senior, Alan Murray et al (35711), J.A. KEMP & CO 14 South Square Gray's Inn, London WC1R 5EU, (GB)
PATENT (CC, No, Kind, Date): EP 264302 A2 880420 (Basic)
EP 264302 A3 890927
EP 264302 B1 930407
APPLICATION (CC, No, Date): EP 87309231 871019;
PRIORITY (CC, No, Date): JP 86247755 861017; JP 86247756 861017; JP 86247761 861017; JP 86304245 861219

DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **H04N-001/40**
ABSTRACT WORD COUNT: 111

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1560
CLAIMS B	(German)	EPBBF1	753
CLAIMS B	(French)	EPBBF1	1200
SPEC B	(English)	EPBBF1	6547
Total word count - document A			0
Total word count - document B			10060
Total word count - documents A + B			10060

INTERNATIONAL PATENT CLASS: **H04N-001/40**

...SPECIFICATION predetermined fixed factors. Such factors are referred to in the following as apportionment factors.

The **error diffusion** methd is superior **to the** dither method, with regard to image resolution and continuous **tone** characteristic, and enables the **degree** of generation of moire patterns to be made very small, even when a printed image...

...However in the case of reproduction of an image which has only small amounts of **changes** in **density** , and computer- **generated** images **which** have areas of extremely uniform density, the **error diffusion** method produces regions **of texture** in the reproduced image, with this texture being specific to the **error diffusion** method. For this **reason , the error diffusion** method has not **been widely** adopted. The reason for generation of this texture is that a fixed relationship is continuously maintained between an object **picture element** and the aforementioned **set of picture** elements which are disposed peripherally adjacent to the object **picture element** , and fixed values **are also** maintained for the respective proportions by which the bi-level conversion error of the object **picture element** is apportioned among **these peripheral picture** elements.

The term "object **picture element** " as used herein **has the** significance of a **picture element** which is currently **being processed** , to determine a corresponding bi-level display image value, with data being utilized in that...

?

24/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01061083
C-axis oriented thin film ferroelectric transistor memory cell and method of making the same
C-Achse orientierte ferroelektrische Dunnschichttransistorzelle und deren Herstellungsverfahren
Cellule de memoire de transistor ferroelectrique a couche mince orientee a l'axe c et son procede de fabrication
PATENT ASSIGNEE:
Sharp Kabushiki Kaisha, (260715), 22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka 545-8522, (JP), (Applicant designated States: all)
SHARP MICROELECTRONICS TECHNOLOGY, INC., (1005671), 5700 NW Pacific Rim Blvd., Camas, WA 98607, (US), (Applicant designated States: all)
INVENTOR:
Hsu, Sheng Teng, 2216 NW Trout Court, Camas, WA 98607, (US)
Lee, Jong Jan, 4635 NW Valley Street, Camas, WA 98607, (US)
Peng, Chien Hsiung, 2014 NE 159th Avenue, Vancouver, WA 98604, (US)
LEGAL REPRESENTATIVE:
Brown, Kenneth Richard et al (28831), R.G.C. Jenkins & Co. 26 Caxton Street, London SW1H 0RJ, (GB)
PATENT (CC, No, Kind, Date): EP 936675 A2 990818 (Basic)
EP 936675 A3 010808
APPLICATION (CC, No, Date): EP 98310500 981221;
PRIORITY (CC, No, Date): US 2364 980102
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H01L-029/51; H01L-021/336; H01L-029/78; H01L-021/02
ABSTRACT WORD COUNT: 267
NOTE:
Figure number on first page: 4

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9933	2671
SPEC A	(English)	9933	11301
Total word count - document A			13972
Total word count - document B			0
Total word count - documents A + B			13972

...SPECIFICATION mu)m if the doping density of the n-) region is about 1.0(center **dot**)1016)cm-3). The **threshold** voltage may be adjusted by **changing** the doping **density** and the thickness of the n-) channel layer and the permitivity and the remnant charge...

24/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00958753
Ferroelectric memory cell and method of making the same
Ferroelektrische Speicherzelle und deren Herstellungsverfahren
Cellule de memoire ferroelectrique et son procede de fabrication
PATENT ASSIGNEE:
Sharp Kabushiki Kaisha, (260715), 22-22, Nagaike-cho, Abeno-ku, Osaka 545

, (JP), (applicant designated states:
AT;BE;CH;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
SHARP MICROELECTRONICS TECHNOLOGY, INC., (1005671), 5700 NW Pacific Rim Blvd., Camas, WA 98607, (US), (applicant designated states:
AT;BE;CH;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
Hsu, Sheng Teng, 2216 NW Trout Court, Camas, WA 98607, (US)
Lee, Jong Jan, 4635 NW Valley Street, Camas, WA 98607, (US)
Peng, Chien-Hsiung, 2014 NE 159th Avenue, Vancouver, WA 98684, (US)
LEGAL REPRESENTATIVE:
Brown, Kenneth Richard et al (28831), R.G.C. Jenkins & Co. 26 Caxton Street, London SW1H 0RJ, (GB)
PATENT (CC, No, Kind, Date): EP 869557 A2 981007 (Basic)
EP 869557 A3 990107
APPLICATION (CC, No, Date): EP 98301688 980306;
PRIORITY (CC, No, Date): US 812579 970307; US 834499 970404; US 869534 970606; US 870161 970606; US 870375 970606; US 905380 970804
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: H01L-029/51; H01L-027/115; H01L-021/8247;
ABSTRACT WORD COUNT: 145

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9841	8311
SPEC A	(English)	9841	17198
Total word count - document A			25509
Total word count - document B			0
Total word count - documents A + B			25509

...SPECIFICATION mu)m if the doping density of the n-) region is about 1.0(center **dot**)1016)cm-3). The **threshold** voltage may be adjusted by **changing** the doping **density** and the thickness of the n-) channel layer, and the permitivity and the remnant charge...

24/3,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00159826
Picture information signal processing apparatus.
Signalverarbeitungsgerat fur Bildinformationen.
Appareil de traitement de signaux d'information d'images.
PATENT ASSIGNEE:
KABUSHIKI KAISHA TOSHIBA, (213130), 72, Horikawa-cho Saiwai-ku, Kawasaki-shi Kanagawa-ken 210, (JP), (applicant designated states:
DE;FR;GB)
INVENTOR:
Hidekazu, Sekizawa c/o Patent Division Toshiba KK, 1-1 Shibaura 1-chome, Minato-ku Tokyo 105, (JP)
LEGAL REPRESENTATIVE:
Blumbach Weser Bergen Kramer Zwirner Hoffmann Patentanwalte (100371), Radeckestrasse 43, W-8000 Munchen 60, (DE)
PATENT (CC, No, Kind, Date): EP 158155 A2 851016 (Basic)
EP 158155 A3 880504
EP 158155 B1 910731
APPLICATION (CC, No, Date): EP 85103009 850315;
PRIORITY (CC, No, Date): JP 8459426 840329
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: H04N-001/40; H04N-001/46;

ABSTRACT WORD COUNT: 173

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1546
CLAIMS B	(German)	EPBBF1	1432
CLAIMS B	(French)	EPBBF1	1906
SPEC B	(English)	EPBBF1	7400
Total word count - document A			0
Total word count - document B			12284
Total word count - documents A + B			12284

...ABSTRACT binary encoded by the fixed threshold value, and the picture information signals corresponding to a **dot** picture or a **variable density** picture are **dithered** .
?

27/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00893788
Printing system utilizing inks of different densities, cartridge used therefor, and method of recording images
Drucksystem mit Verwendung von Tinten verschiedener Dichte, Kartusche zur Verwendung damit, und Bildaufzeichnungsverfahren
Systeme d'impression utilisant des encres a densite differente, cartouche utilisee pour celui-ci, et procede d'enregistrement d'images
PATENT ASSIGNEE:
SEIKO EPSON CORPORATION, (730002), 4-1, Nishi-shinjuku 2-chome, Shinjuku-ku, Tokyo 163, (JP), (Applicant designated States: all)
INVENTOR:
Shimada, Kazumichi, c/o Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, (JP)
Kakutani, Toshiaki, c/o Seiko Epson Corporation, 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, (JP)
LEGAL REPRESENTATIVE:
Tothill, John Paul et al (81551), Frank B. Dehn & Co. 179 Queen Victoria Street, London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 817464 A2 980107 (Basic)
EP 817464 A3 000308
APPLICATION (CC, No, Date): EP 97304670 970627;
PRIORITY (CC, No, Date): JP 96188233 960627; JP 96297608 961018
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; SI
INTERNATIONAL PATENT CLASS: H04N-001/40; H04N-001/52
ABSTRACT WORD COUNT: 262
NOTE:
Figure number on first page: 14

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9802	1714
SPEC A	(English)	9802	10293
Total word count - document A			12007
Total word count - document B			0
Total word count - documents A + B			12007

...SPECIFICATION by the lower-density ink;
specifying means for specifying the existence and non-existence of **dots** by the two inks of **different densities** according to the **input tone** signals, based on the recording characteristic; and
regulating means for regulating discharge of each ink...
...printing system, the definition means may have a table for specifying the recording densities of **dots** by the two inks of **different densities** corresponding to the **input tone** signals. This simplifies arithmetic operations.
In case that ...signals of the original image to be printed;
specifying the existence and non-existence of **dots** by the two inks of **different densities** according to the **input tone** signals, based on the recording characteristic; and
regulating discharge of each ink from the head...

...signals of the original image to be printed;
specifying the existence and non-existence of **dots** by the two inks of **different densities** according to the **input tone** signals, based

File 9:Business & Industry(R) Jul/1994-2004/Feb 03
(c) 2004 Resp. DB Svcs.
File 15:ABI/Inform(R) 1971-2004/Feb 03
(c) 2004 ProQuest Info&Learning
File 16:Gale Group PROMT(R) 1990-2004/Feb 04
(c) 2004 The Gale Group
File 20:Dialog Global Reporter 1997-2004/Feb 04
(c) 2004 The Dialog Corp.
File 47:Gale Group Magazine DB(TM) 1959-2004/Feb 03
(c) 2004 The Gale group
File 75:TGG Management Contents(R) 86-2004/Jan W4
(c) 2004 The Gale Group
File 80:TGG Aerospace/Def.Mkts(R) 1986-2004/Feb 04
(c) 2004 The Gale Group
File 88:Gale Group Business A.R.T.S. 1976-2004/Feb 04
(c) 2004 The Gale Group
File 98:General Sci Abs/Full-Text 1984-2004/Jan
(c) 2004 The HW Wilson Co.
File 112:UBM Industry News 1998-2004/Jan 27
(c) 2004 United Business Media
File 141:Readers Guide 1983-2004/Dec
(c) 2004 The HW Wilson Co
File 148:Gale Group Trade & Industry DB 1976-2004/Feb 04
(c)2004 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 275:Gale Group Computer DB(TM) 1983-2004/Feb 04
(c) 2004 The Gale Group
File 264:DIALOG Defense Newsletters 1989-2004/Jan 15
(c) 2004 The Dialog Corp.
File 484:Periodical Abs Plustext 1986-2004/Jan W4
(c) 2004 ProQuest
File 553:Wilson Bus. Abs. FullText 1982-2004/Jan
(c) 2004 The HW Wilson Co
File 570:Gale Group MARS(R) 1984-2004/Feb 04
(c) 2004 The Gale Group
File 608:KR/T Bus.News. 1992-2004/Feb 04
(c)2004 Knight Ridder/Tribune Bus News
File 620:EIU:Viewswire 2004/Feb 03
(c) 2004 Economist Intelligence Unit
File 613:PR Newswire 1999-2004/Feb 04
(c) 2004 PR Newswire Association Inc
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Feb 04
(c) 2004 The Gale Group
File 623:Business Week 1985-2004/Feb 03
(c) 2004 The McGraw-Hill Companies Inc
File 624:McGraw-Hill Publications 1985-2004/Feb 03
(c) 2004 McGraw-Hill Co. Inc
File 634:San Jose Mercury Jun 1985-2004/Feb 03
(c) 2004 San Jose Mercury News
File 635:Business Dateline(R) 1985-2004/Feb 03
(c) 2004 ProQuest Info&Learning
File 636:Gale Group Newsletter DB(TM) 1987-2004/Feb 04
(c) 2004 The Gale Group
File 647:CMP Computer Fulltext 1988-2004/Jan W4
(c) 2004 CMP Media, LLC
File 696:DIALOG Telecom. Newsletters 1995-2004/Jan 15
(c) 2004 The Dialog Corp.
File 674:Computer News Fulltext 1989-2004/Jan W4
(c) 2004 IDG Communications
File 810:Business Wire 1986-1999/Feb 28

(c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
(c) 1999 PR Newswire Association Inc
? ds

Set	Items	Description
S1	19261	(DIFFERENT OR CHANG? OR VARY??? OR ADAPTIVE? OR VARIABLE OR VARIES)(3N)DENSIT?
S2	742991	DOT OR PIXEL? OR (PICTURE OR PICTORIAL)(3N)ELEMENT OR PEL - OR DPI OR DOTS()PER()INCH
S3	2958	(VARIABLE OR VARYING OR CHANGING OR ADAPTIVE?)(5N)(THRESHOLD? OR DITHER? OR TONE()CURVE? OR THRESHOLD()TABLE OR THRESHOLD()MEMORY)
S4	290	INPUT()(TONE? OR GRADATION? OR COLOR? OR INK?? OR COLORANT? OR COLOURANT? OR COLOUR?)
S5	1677	ERROR()(DIFFUSION? OR DISPERSION? OR SPREAD? OR DISTRIBUT?)
S6	0	S1(S)S2(S)S3(S)S4
S7	9	S1(S)S2(S)S3
S8	3	RD S7 (unique items)
S9	0	S1(S)S2(S)S5
S10	190	S2(S)S5
S11	0	S10(S)S4
S12	111	S10(S)(TONE? OR GRADATION? OR COLOR? OR INK?? OR COLORANT? OR COLOURANT? OR COLOUR?)
S13	44	S12(10N)PRINT?
S14	44	S13 NOT S7
S15	6	S14 AND PY=1999:2004
S16	38	S14 NOT S15
S17	25	RD S16 (unique items)

8/3,K/1 (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2004 The Gale group. All rts. reserv.

03464406 SUPPLIER NUMBER: 09468045 (USE FORMAT 7 OR 9 FOR FULL TEXT)
PC scanners: not just for high-end users anymore. (Lab Notes; includes related glossary) (column)
Alford, Roger C.
PC Magazine, v9, n17, p403(9)
Oct 16, 1990
DOCUMENT TYPE: column ISSN: 0888-8507 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 7681 LINE COUNT: 00596

... scanners: flatbed, sheet-fed, and overhead. A hand-held scanner is not a desktop scanner.
Dithering A method of using **variable dot densities** (with black dots) to simulate various shades of gray. The more dense the dots, the...

8/3,K/2 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

04591841 SUPPLIER NUMBER: 08459976 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Raster plotters: mightier than the pen? (includes related articles on the second generation of Hewlett-Packard's HPGL plotter language and on Synergy Computer Graphics Corp.'s ColorWriter 400 single-pass, uni-directional color plotter)
Carrabine, Laura
Computer-Aided Engineering, v9, n4, p75(5)
April, 1990
ISSN: 0733-3536 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2129 LINE COUNT: 00173

... and E-size color electrostatic plotters, the C-4836R and C-2536R. Both offer 400 **dpi** resolution and can mix both raster and vector on the same drawing by upgrading the plotters for element processing (HPGL, CGI, Cal-Comp 906). Users can **dither** their own colors at **variable dot densities** . Available in March 1990, Precision Image prices the C-4836R (E-size) at $55,000...

8/3,K/3 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

02156417
PRECISION IMAGE UNVEILS NEW RASTER ELECTROSTATIC PLOTTERS: ADDS RASTER CAPABILITY TO ENTER PRODUCT LINE
News Release February 3, 1989 p. 1

... are designed for producing color E- and D-sized drawings, respectively. They each offer 400 **dpi** raster capability. In addition, users can **dither** their own colors at **variable dot densities** . Users can mix both raster and vector on the same drawing by upgrading the plotters...
?

8/3,K/1 (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2004 The Gale group. All rts. reserv.

03464406 SUPPLIER NUMBER: 09468045 (USE FORMAT 7 OR 9 FOR FULL TEXT)
PC scanners: not just for high-end users anymore. (Lab Notes; includes related glossary) (column)
Alford, Roger C.
PC Magazine, v9, n17, p403(9)
Oct 16, 1990
DOCUMENT TYPE: column ISSN: 0888-8507 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 7681 LINE COUNT: 00596

... scanners: flatbed, sheet-fed, and overhead. A hand-held scanner is not a desktop scanner.
Dithering A method of using **variable dot densities** (with black dots) to simulate various shades of gray. The more dense the dots, the...

8/3,K/2 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

04591841 SUPPLIER NUMBER: 08459976 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Raster plotters: mightier than the pen? (includes related articles on the second generation of Hewlett-Packard's HPGL plotter language and on Synergy Computer Graphics Corp.'s ColorWriter 400 single-pass, uni-directional color plotter)
Carrabine, Laura
Computer-Aided Engineering, v9, n4, p75(5)
April, 1990
ISSN: 0733-3536 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2129 LINE COUNT: 00173

... and E-size color electrostatic plotters, the C-4836R and C-2536R. Both offer 400 **dpi** resolution and can mix both raster and vector on the same drawing by upgrading the plotters for element processing (HPGL, CGI, Cal-Comp 906). Users can **dither** their own colors at **variable dot densities** . Available in March 1990, Precision Image prices the C-4836R (E-size) at $55,000...

8/3,K/3 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

02156417
PRECISION IMAGE UNVEILS NEW RASTER ELECTROSTATIC PLOTTERS: ADDS RASTER CAPABILITY TO ENTER PRODUCT LINE
News Release February 3, 1989 p. 1

... are designed for producing color E- and D-sized drawings, respectively. They each offer 400 **dpi** raster capability. In addition, users can **dither** their own colors at **variable dot densities** . Users can mix both raster and vector on the same drawing by upgrading the plotters...
?

17/3,K/1 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.

06008490 Supplier Number: 53405909 (USE FORMAT 7 FOR FULLTEXT)
Xionics compression uses error diffusion. (XipChip processor compression technology) (Product Information)
The Seybold Report on Publishing Systems, v28, n6, p21(1)
Dec 1, 1998
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 288

... as it's sometimes called) has long been used to give the illusion of full- **color** output on a **printer** with a limited palette. When a **pixel** 's **color** cannot be rendered accurately with the available **inks** , the **print** controller adjusts nearby **pixels** to make the error less obvious. Xionics, however, has turned the technique upside down. Knowing...

17/3,K/2 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.

05957099 Supplier Number: 53225413 (USE FORMAT 7 FOR FULLTEXT)
Onyx Graphics, a Raster Graphics Company, Wins TrailBlazer Award for PosterShop 4.0 Large-Format Color Processing Software.
Business Wire, p0633
Nov 17, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 597

... tiling. PosterShop is a true multi-tasking software product, enabling users to preview, RIP and **print** files simultaneously.
Several **dot** patterns are available, including stochastic blue noise mask, error diffusion, standard screening and ordered dither...

17/3,K/3 (Item 3 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.

05510649 Supplier Number: 48349417 (USE FORMAT 7 FOR FULLTEXT)
Onyx Graphics, a Raster Graphics Company, Wins Digital Imaging Award for New PosterShop 4.0 Large-Format Color Processing Software.
Business Wire, p3110008
March 11, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 606

... tiling. PosterShop is a true multi-tasking software product, enabling users to preview, RIP and **print** files simultaneously.
Several **dot** patterns are available, including stochastic blue noise mask, error diffusion, standard screening and ordered dither...

17/3,K/4 (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

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05201894 Supplier Number: 47936095 (USE FORMAT 7 FOR FULLTEXT)
Raster Graphics and Onyx Receive Highest Honors from Digital Graphics Magazine; PiezoPrint 5000 Printer and PosterShop Software Win 1997 TrailBlazer Awards.
Business Wire, p08270078
August 27, 1997
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 568

... tiling. PosterShop is a true multi-tasking software product, enabling users to preview, RIP and **print** files simultaneously.
Several **dot** patterns are available, including stochastic blue noise mask, error diffusion, standard screening and ordered dither...

17/3,K/5 (Item 5 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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05150403 Supplier Number: 47861348 (USE FORMAT 7 FOR FULLTEXT)
Raster Graphics Announces Onyx PosterShop 3.5 Color Production Software Approved for 3M Scotchprint Graphics.
Business Wire, p07280112
July 28, 1997
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 467

... tiling. PosterShop is a true multi-tasking software product, enabling users to preview, RIP and **print** files simultaneously.
Several **dot** patterns are available, including stochastic blue noise mask, error diffusion, standard screening and ordered dither...

17/3,K/6 (Item 6 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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04886283 Supplier Number: 47187170 (USE FORMAT 7 FOR FULLTEXT)
Epson's new 1440 dpi color ink jet printers propel on-screen print management into the next generation.
Business Wire, p3060006
March 6, 1997
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 698

... color translation process, a high-speed 3-D look-up table is used to produce **colors** that are true to the original image.
The new **printer** driver is also included with the EPSON Stylus Color 400, a four-color, 720 dpi...

17/3,K/7 (Item 7 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.

04877681 Supplier Number: 47175314 (USE FORMAT 7 FOR FULLTEXT)
1440 dpi: You can only see it in Epson Color!
Business Wire, p03030310
March 3, 1997
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 861

... resistance. Even overhead transparencies are dry to touch with these new inks.
New EPSON Stylus **Printer** Driver
The new **printer** driver also contributes to 1440 **dpi** "Photo Quality" **printing** through halftoning and **color** translation processes. Epson's new AcuPhoto halftoning module on the driver uses advanced error diffusion...

17/3,K/8 (Item 8 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.

03737114 Supplier Number: 45301156 (USE FORMAT 7 FOR FULLTEXT)
The Right Frequency
Printing Impressions, p44
Feb, 1995
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 2953

... spots to minimize overlap and, therefore, eliminate the "bump" in the mid- and three-quarter- **tones** . Finally, Lazel lets **printers** specify **tone** compensation curves to optimize output for particular presses and conditions.
Although it doesn't directly...

17/3,K/9 (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2004 The Gale group. All rts. reserv.

04689427 SUPPLIER NUMBER: 19125074 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Capture the color. (includes related articles on top-rated scanner, different types of scanners, helping users print what they scan, color flatbed scanners and product table) (overview article of 17 color flatbed scanners) (Hardware Review) (Evaluation)
Stone, M. David
PC Magazine, v16, n5, p163(19)
March 4, 1997
DOCUMENT TYPE: Evaluation ISSN: 0888-8507 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 5440 LINE COUNT: 00409

... rule of thumb is to set the scanner resolution to twice the line screen the **printer** uses. If your output device uses **error diffusion** dithering (many **ink** jets, color lasers), set the scanner to two-thirds or three-quarters of the printer's resolution. For printers that don't dither (thermal dye), scan at the **printer** resolution (usually 300 **dpi**). To stretch or shrink the image size, you'll need to adjust the original scanning...

17/3,K/10 (Item 1 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.
(c) 2004 The Gale Group. All rts. reserv.

04358181 SUPPLIER NUMBER: 19718354
Model-based halftoning of color images.
Pappas, Thrasyvoulos N.
IEEE Transactions on Image Processing, v6, n7, p1004(11)
July, 1997
ISSN: 1057-7149 LANGUAGE: English RECORD TYPE: Abstract

ABSTRACT: Model-based techniques for **color printers** using the characteristics of the **printer** and the human visual system are presented. Modified **error diffusion** algorithm and the least squares model based algorithm extend the gray-scale model based techniques...

...use of printer models to design blue-noise screens is also examined, with a specific **printer** model to represent **ink dot** overlaps.

17/3,K/11 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

09722067 SUPPLIER NUMBER: 19748281 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Onyx Graphics Enhances PosterShop to Optimize Output from Raster Graphics PiezoPrint 5000 Printers.
Business Wire, p9020279
Sep 2, 1997
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 619 LINE COUNT: 00057

... the fourth quarter of 1997.
About PosterShop
PosterShop is a production-oriented software system for **printing** to large-format digital **color printers** . PosterShop software's features include support for the most popular file formats, including PostScript, TIFF...

...tiling. PosterShop is a true multi-tasking software product, enabling users to preview, RIP and **print** files simultaneously. Several **dot** patterns are available, including stochastic blue noise mask, error diffusion, standard screening and ordered dither...

17/3,K/12 (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

07588696 SUPPLIER NUMBER: 15953586 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Visual Edge supports 3M Vinyl Scotchprint applications.
Business Wire, p12070117
Dec 7, 1994
LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 236 LINE COUNT: 00020

... materials.
Visual Edge Technology was the first company to produce software for large format color **printing** . EDGEprint Software utilizes its own patented

random **dot** conversion algorithm to produce high resolution graphic **prints** of exceptional quality. This proprietary **error diffusion** technique eliminates the jagged look of images and type that can plague scaled up prints...

17/3,K/13 (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

07512932 SUPPLIER NUMBER: 15728629 (USE FORMAT 7 OR 9 FOR FULL TEXT)
The latest printers for image output: new accent on poster-sized solutions.
Bielski, Lauren
Advanced Imaging, v9, n8, p50(5)
August, 1994
ISSN: 1042-0711 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 3916 LINE COUNT: 00311

... has now put together the Image Production System Series built around a 54" Xerox electrostatic **color printer** ideal for custom murals or **printing** short run posters. The equipment is designed to print large scale artwork for a thoroughly...

17/3,K/14 (Item 4 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

05464831 SUPPLIER NUMBER: 11174672 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Digital printing and DSP expand desktop publishing. (digital signal processing) (Photonics Applications)
Burke, Joe
Photonics Spectra, v25, n8, p92(1)
August, 1991
ISSN: 0731-1230 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 459 LINE COUNT: 00036

... in Berkeley, Calif., combines text, computer graphics, photographs and drawings into any desired layout, and **prints** the results in full **color** on paper up to 42 inches wide and potentially several hundred feet long. Instead of the half- **tone** , four- **color** process used in conventional **printing** , the system uses an **error - diffusion** algorithm to create a continuous-tone color image. The algorithm creates an image that emulates the grain pattern in photographic film emulsion, rather than the discrete circle-and- **dot** pattern used in four- **color printing** .
No intermediate steps
Since the process is completely electronic, there are no intermediate steps, such...

17/3,K/15 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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02117147 SUPPLIER NUMBER: 19960212 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Large-format color printer update: piezo proliferates as market widens.(includes related article on piezoelectric-technology print head manufacturers) (Industry Trend or Event)
Evans, Patricia
Seybold Report on Publishing Systems, v27, n4, p18(10)

Oct 27, 1997
ISSN: 0736-7260 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 7935 LINE COUNT: 00600

... every few rolls of material used.
Quality. Normally quality is a positive feature of electrostatic **printers** , and the 360e, with its 400X400- **dpi** resolution and liquid **toner** , may offer the same benefit. But we weren't impressed by the sample distributed at...

17/3,K/16 (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01825586 SUPPLIER NUMBER: 17210029 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Workgroup color printers: making the choices. (includes related articles about color quality, with a sample)
Spencer, David R.; Haller, Peter J.
Seybold Report on Desktop Publishing, v9, n11, p18(7)
July 17, 1995
ISSN: 0889-9762 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 5754 LINE COUNT: 00471

... to reduce toner dropouts. (We printed samples on all three Tektronix machines.)
The Phaser 340 **prints** at 300 **dpi** vertically but offers both 300- and 600- **dpi** horizontal addressability. Advanced error-diffusion screening allows high-quality tints and images from the somewhat...

...ink jets spaced across a rotating drum significantly increase the speed relative to prior solid- **ink printers** . **Print** speeds are 3.75 ppm for straight 300- **dpi prints** , but less than 2 ppm for the higher-quality 600- **dpi** modes, and there is no speed advantage when **printing** monochrome pages. However, the Phaser 340, unlike the other printers, prints the first page without...

17/3,K/17 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01805811 SUPPLIER NUMBER: 17262820 (USE FORMAT 7 OR 9 FOR FULL TEXT)
The primer. (an introduction to color printer technologies) (Color Output Breaks Through) (Cover Story) (Tutorial)
Grunin, Lori; Hart, John; Klare, Matthew; Poor, Alfred
Windows Sources, v3, n8, p56(6)
August, 1995
DOCUMENT TYPE: Tutorial ISSN: 1065-9641 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3202 LINE COUNT: 00258

... Finally, traditional line screens (also known as a clustered dot dither) rotate lines of primary- **colored** dots to different angles. The relationship between your **printer** 's resolution and the fineness of its line screen or dither grid determines the number of **color** shades it can reproduce.
Printers that produce variable-size dots can better simulate a broader range of tones--as many...

17/3,K/18 (Item 4 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01795991 SUPPLIER NUMBER: 16979111 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Color output. (color printer products) (Seybold Special Report, Part II)
Seybold Report on Publishing Systems, v24, n18, pS3(8)
May 15, 1995
ISSN: 0736-7260 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 7714 LINE COUNT: 00598

... to drive both a color copier and a large-format plotter.
Screening options. Large-format **ink** -jet **printers** traditionally have used **error - diffusion** technology to produce images at 300-dpi resolution. However, now that stochastic (fm) screening has...

...ability to produce varying spot sizes), several of the developers of controllers for large-format **ink** -jet **printers** are offering stochastic screening as an alternative to **error diffusion** because it is so much faster.
Proofing options. As we move more inextricably into digital...

17/3,K/19 (Item 5 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01699180 SUPPLIER NUMBER: 16199918 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Colourful printing at a good price. (Epson's Stylus Color inkjet printer) (Hardware Review) (Colour Inkjet Printers) (Evaluation)
Bradwell, David
PC User, n238, p77(1)
June 29, 1994
DOCUMENT TYPE: Evaluation ISSN: 0263-5720 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 781 LINE COUNT: 00062

ABSTRACT: Epson's 639 pounds sterling Stylus **Color** inkjet **printer** provides near-photographic output at up to 720-by-720 pixels on plain paper and...

...to 4 ppm. Features of the printing mechanism include an innovative 'cool crystal' piezoelectric inkjet **print** head with one set of black and three sets of **color** nozzles fed by two **ink** cartridges. Other **printer** features include a MicroWeave function to eliminate banding, Epson **Error Diffusion** half-toning to produce more than 256 grey scales or more than 16 million colors...

17/3,K/20 (Item 6 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01531035 SUPPLIER NUMBER: 12477966 (USE FORMAT 7 OR 9 FOR FULL TEXT)
HP DeskWriter C printer driver development. (development of Macintosh driver for HP color ink-jet printer) (Technical)
Allen, William J.; Courville, Toni D.; Miller, Steven O.
Hewlett-Packard Journal, v43, n4, p93(10)
August, 1992

DOCUMENT TYPE: Technical ISSN: 0018-1153 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 7372 LINE COUNT: 00576

... average value of the noise is 0, so the image is not lightened or darkened.

Error diffusion does not suffer from contouring. **Color** gradients are **printed** as smoothly varying regions of increasing **dot** density.

Error diffusion can produce artifacts. These are most likely to be visible in large...

17/3,K/21 (Item 7 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01494341 SUPPLIER NUMBER: 11674564 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Image-In-Color: desktop darkroom. (image processing software from Image-In Inc.) (Software Review) (Product Reviews) (Evaluation)
Glinert-Stevens, Susan
PC Sources, v3, n1, p401(1)
Jan, 1992
DOCUMENT TYPE: Evaluation ISSN: 1052-6579 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 837 LINE COUNT: 00066

... sucked down the drain. You can create your own filters and save them, too.

The **printer** , display, and scanner calibrate to ensure that the image's **tones** reflect the most realistic rendering. You can adjust the half-tone angle and frequency, dot...

17/3,K/22 (Item 8 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01300575 SUPPLIER NUMBER: 07333596 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Has colour printing entered a new phase? (Hardware Review) (Tektronix Phaser printer) (evaluation)
Hampshire, Nick
3D, n13, p39(3)
May, 1989
DOCUMENT TYPE: evaluation ISSN: 0953-2331 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3591 LINE COUNT: 00272

... the Phaser printer performs all the basic image manipulations required to create a high quality **print** output. These manipulations include **colour** dithering, which provides all the intermediate colour shades using the CMYB pigments to give the...

...diffusion process which checks all the surrounding dots in order to minimise error between the **printed dot colour** and the desired **dot colour** .

The translation from light additive to light subtractive is handled by the Phaser's gamma...

17/3,K/23 (Item 9 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01241312 SUPPLIER NUMBER: 06300637 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Printers show their colors as performance and reliability improve.
Bond, John
Computer Design, v27, n1, p43(6)
Jan 1, 1988
ISSN: 0010-4566 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 4094 LINE COUNT: 00314

... control with an intelligent software driver and a fast host.
Besides the problem of matching **colors** of the CRT to those being **printed** , the **print** image may have to be resized because the **pixel** map of the two devices may be different. This addressability difference can be corrected by...

...dissimilar devices and to optimize the color match and increase the color range of the **printer** . The **color** manipulations that image processing performs to refine the **printer** images may include such techniques as dithering, **error diffusion** , gamma media correction and gray-scale adjustment.
Hard-copy methods
There are a number of...

17/3,K/24 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

03901429 Supplier Number: 50075589 (USE FORMAT 7 FOR FULLTEXT)
-FUJITSU: Duplex production scanner with higher speeds & versatile document handling
M2 Presswire, pN/A
June 11, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 850

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...service areas: Peripheral Products consist of computer peripheral devices, including high-capacity hard disk drives, **printers** (**dot** -matrix and laser), document imaging scanners, and large-screen plasma displays. Financial Products is focused...

17/3,K/25 (Item 2 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

02741260 Supplier Number: 45562230 (USE FORMAT 7 FOR FULLTEXT)
POWERSCRIPT II - SMART SCREENS FROM SOLUTIONS
M2 Presswire, pN/A
May 25, 1995
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 162

... screen ruling giving a near continuous tone effect on both Electrostatic and InkJet wide format **printers** .

Smart Screens also retains all the benefits associated with **dot** screens vs dither or error diffusion, ie: faster processing times, retention of detail in the...

?

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File 256:SoftBase:Reviews,Companies&Prods. 82-2004/Dec
         (c)2004 Info.Sources Inc
? ds

Set     Items   Description
S1         83   (DIFFERENT OR CHANG? OR VARY??? OR ADAPTIVE? OR VARIABLE OR
               VARIES) AND DENSIT?
S2       1224   DOT OR PIXEL? OR (PICTURE OR PICTORIAL)(3N)ELEMENT OR PEL -
               OR DPI OR DOTS()PER()INCH
S3         12   (VARIABLE OR VARYING OR CHANGING OR ADAPTIVE?) AND (THRESH-
               OLD? OR DITHER? OR TONE()CURVE? OR THRESHOLD()TABLE OR THRESH-
               OLD()MEMORY)
S4          2   INPUT()(TONE? OR GRADATION? OR COLOR? OR INK?? OR COLORANT?
               OR COLOURANT? OR COLOUR?)
S5          2   ERROR()(DIFFUSION? OR DISPERSION? OR SPREAD? OR DISTRIBUT?)
S6          0   AU=(KAKUTANI, T? OR KAKUTANI T?)
S7          0   S1 AND S2 AND S3 AND (S4 OR S5)
S8         12   S1 AND S2
S9          0   S8 AND S3
S10         4   S4 OR S5
S11        12   S8 NOT S10
```

10/3,K/1
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2004 Info.Sources Inc. All rts. reserv.

00096980 DOCUMENT TYPE: Review

PRODUCT NAMES: Intune 4.01 (317306)

TITLE: PID Software Ups Ante With Advanced Diagnostics, Breaks Ground Wi...
AUTHOR: Sperber, Bob
SOURCE: Control, v9 n9 p160(2) Sep 1996
ISSN: 1049-5541
HOMEPAGE: http://www.controlmagazine.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

REVISION DATE: 20020930

...support any controller. Loop diagnostics are excellent, particularly adaptive tuning, which works together with an **error distribution** analysis diagram that tells users how often the process and variables are on the money...

10/3,K/2
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00087034 DOCUMENT TYPE: Review

PRODUCT NAMES: Color Matching (830269)

TITLE: Color management product buyers guide
AUTHOR: Hevenor, Keith
SOURCE: Electronic Publishing & TypeWorld, v19 n12 p10(1) Dec 1, 1995
ISSN: 0194-4851

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

REVISION DATE: 19960530

...color management. Users can get help from vendors who offer software that calibrates and organizes **input color** , but they really need a product that monitors the entire process. The true test of...

10/3,K/3
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
(c)2004 Info.Sources Inc. All rts. reserv.

00083854 DOCUMENT TYPE: Review

PRODUCT NAMES: Network Management (830216)

TITLE: As Complexity Increases

AUTHOR: Krivda, Cheryl D
SOURCE: MidRange Systems, v8 n17 p19(3) Sep 15, 1995
ISSN: 1041-8237
HOMEPAGE: http://www.midrangesystems.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

REVISION DATE: 20020630

...becomes more important. The network manager must ensure maximum up-time, centralize operations and reduce **error** , **distribute** software correctly, add new applications and licenses, and stay within architectural limits. Network management products...

10/3,K/4
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00060884 DOCUMENT TYPE: Review

PRODUCT NAMES: Color Encore (492981); QuickScan (483052); KEPS Precision Color Management (477494); FotoTune (493007)

TITLE: Calibration Software for Desktop Scanners
AUTHOR: Stoy, John W
SOURCE: Color Publishing, p34(4) Jan/Feb 1994
ISSN: 1055-9701

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

REVISION DATE: 20021125

...standard set. The software creates a lookup table to account for differences. Kodak's Precision **Input** **Color** Calibration is a superior calibration package, including three sets of reference values and three precision...
?

11/3,K/1
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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01109029 DOCUMENT TYPE: Product

PRODUCT NAME: SyncMAPP Press & Proof (109029)

London Litho (640417)
7100 N Lawndale Ave
Lincolnwood, IL 60645 United States
TELEPHONE: (847) 679-4600

RECORD TYPE: Directory

CONTACT: Sales Department

REVISION DATE: 021025

...Plate tool analyzes conventional and digital plate exposures, allowing users to establish tonal standards, test **different** plates, or convert from analog platemaking to computer-to-plate (CTP). Tapping the system, users...

...within approximately 10 days. SyncMAPP Press & Proof's SyncMAPP Echo Proof tool compares colors between **different** proofs or press sheets, so staff can match colors between devices or to create benchmarks...

...ICC color profiles for all analyzed devices. Reports include information on print characteristics. Spreadsheets include **density** , **dot** area, and **dot** gain value information. SyncMAPP Press & Proof's SyncMAPP Echo Press evaluates users' sheetfed printing presses...

...be compared to SWOP and CRAGOL specifications. The system provides gamut, ink and media characteristic, **density** , **dot** gain, trap, print contrast, and other information.

11/3,K/2
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00142407 DOCUMENT TYPE: Review

PRODUCT NAMES: FireWire (800791); Machine Vision (833908)

TITLE: FireWire pushes plug-n-play imaging
AUTHOR: Wilson, Andrew
SOURCE: Vision Systems Design, v7 n9 pS8(5) Sep 2002
ISSN: 1089-3709
HOMEPAGE: http://www.vision-systems-design.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

REVISION DATE: 20030228

...with the existing versions. 13894b also complies with point-to-point connectivity, plug-and-play **changeability** , and guaranteed timing.

Important to the machine vision and image processing industry is support for high-megapixel **densities** and more color depths. Presently solid-state-camera makers, such as Basler AG, MetaControls, and...
...the higher dynamic range of a cooled CCD camera provides an extended range of 1344x1024 **pixels** and full remote control from the connected PC with an IEEE 1394 interface.

11/3,K/3
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00135230 DOCUMENT TYPE: Review

PRODUCT NAMES: Quantum Computing (842141)

TITLE: Ultimate Alchemy: Research into artificial atoms could lead to one...
AUTHOR: McCarthy, Wil
SOURCE: Wired, v9 n10 p150(12) Oct 2001
ISSN: 1059-1028
HOMEPAGE: http://www.wired.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

REVISION DATE: 20020330

...at the end of a stripe on a quantum wire are etched away, a quantum **dot** is left that delimits electrons in all three dimensions. The electrons cannot flow or move, and have to act as deBroglie standing waves, or probability- **density** functions, which are amorphously shaped waves of diffuse electric charge. This same phenomenon also occurs...

...further, scientists have isolated a nanostructure known as an artificial or designer atom. Future quantum **dot** processors are likely to merge all the best aspects of digital, analog, and quantum processing. Identical hardware theoretically could be used for all such operations. The hardware could also **change** modes on the fly, based on the problem to be solved.

11/3,K/4
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00134075 DOCUMENT TYPE: Review

PRODUCT NAMES: MapViewer 4.0 (798347)

TITLE: MapViewer 4, Grapher 3: A Cartographic Dark Horse?
AUTHOR: Comenetz, Joshua
SOURCE: GeoSpatial Solutions, v11 n9 p42(4) Sep 2001
ISSN: 1529-7403
HOMEPAGE: http://www.geospatial-online.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: B

REVISION DATE: 20030330

...which adds advanced graphing capabilities, to create a strong tool for data display and presentation. **Dot** mapping is flexible. Although dots can only be round, users can **vary** their size, color, and border color. It is not possible to specify a regular grid pattern of dots, or to adjust **dot density** manually. Users can also **vary** the size, color, and border color of graduated symbols, although the variety of symbols is...

11/3,K/5
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00128177 DOCUMENT TYPE: Review

PRODUCT NAMES: SilverFast PhotoCD 5 (033049); Extensis Intellihance Pro 4.0 (479209); nik Color Efex Pro! (017795); Test Strip (667081)

TITLE: Build your own plug-in toolkit: Photoshop-compatible plug-ins...
AUTHOR: Farace, Joe
SOURCE: ComputerUser, v18 n13 p70(2) Nov 2000
ISSN: 1087-481X
HOMEPAGE: http://www.computeruser.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

REVISION DATE: 20020422

...and resized before it is acquired by Photoshop. Intellihance Pro's features include a Clipped **Pixel** Display that highlights **pixels** that are too bright, too dark, or too saturated, and the Dust & Scratch Removal feature...
...specks and scratches without destroying detail. Color Efex Pro! is a package that includes 46 **different** plug-ins, including a Classical Blur filter that produces an effect similar to using a...

...in that functions like the traditional photographic technique of making a test strip that shows **different** degrees of **density** and color.

11/3,K/6
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00122543 DOCUMENT TYPE: Review

PRODUCT NAMES: TransLux (792951); Lord of the Wipe (792969)

TITLE: Controlling Interests: AccessFX's TransLux and Lord of the Wipe
AUTHOR: Saucier, Christine A
SOURCE: AV Video & Multimedia Producer, v22 n1 p84(2) Jan 2000
ISSN: 1090-7459
HOMEPAGE: http://www.avvideo.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: B

REVISION DATE: 20010730

...their interface appearance. With TransLux's ability to control multiple video transitions, editors can add **pixel** -based wipes by defining such choices as **pixel** height, width and **density** , and X and Y **pixel** velocity. Lord of the Wipe provides gradient wipes for which users can set rotation, scaling...
...the plug-in). AcessFX transitions are added to Premiere timeline and are double- clicked to **change** settings. Users can preview results of settings by moving a slider or clicking a loop...

11/3,K/7
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00117197 DOCUMENT TYPE: Review

PRODUCT NAMES: Magic Mask 2.0 (676713)

TITLE: Chroma Graphics Magic Mask 2.0
AUTHOR: Schaub, George
SOURCE: Digital Imaging, p49(2) Apr 1999
ISSN: 1084-5119
HOMEPAGE: http://www.digitalimaging.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

REVISION DATE: 19990930

...features include conversion of a mask or an existing selection to a straight line; a **pixel** -precise clipping path; an expanded **density** mask tool for creating and tweaking custom masks; multiple common color range presets for **density** masking; and selection plug-in-based accessibility. The original features that made Magic Mask a...
...and with Color Brush, users can choose multiple objects with independent color ranges concurrently. The **Density** Tool is enhanced to permit creation of custom **variable** **density** masks for color correction using either HSV settings or multiple presets for common color ranges...

11/3,K/8
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00106379 DOCUMENT TYPE: Review

PRODUCT NAMES: MapViewer 2.13 Windows (798347)

TITLE: MapViewer 2.13
AUTHOR: Thrall, Susan Elshaw
SOURCE: Geo Info Systems, v7 n11 p48(3) Nov 1997
ISSN: 1051-9858
HOMEPAGE: http://www.geoinfosystems.com

RECORD TYPE: Review
REVIEW TYPE: Review

GRADE: B

REVISION DATE: 20021030

...to draw multiple types of thematic maps, including choropleth maps using colors or hatch patterns, **dot density** maps, proportional symbol maps, pie and bar chart maps, and prism maps. Creating basic thematic...

...for defining legend and theme categories, colors, line width, and symbol type, along with the **variable** mapped. Many annoying aspects and other glitches reduce the appeal of MapViewer, however. For example...

11/3,K/9
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00105280 DOCUMENT TYPE: Review

PRODUCT NAMES: Intellihance 3.0 Macintosh (619167); Extensis Mask Pro 1.0 Macintosh (681709); Magic Mask 1.0 Macintosh (676713)

TITLE: Photoshop Filters
AUTHOR: Martinez, Carlos Domingo
SOURCE: Macworld, v14 n12 p54(1) Dec 1997
ISSN: 0741-8647
HOMEPAGE: http://www.macworld.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: B

REVISION DATE: 20020422

...be the answer depending on the user's style of working. These two extensions take **different** approaches to easing the task of masking. Magic Mask's Color and **Pixel** brushes are smart ones. When the user drags them over an image, they can automatically choose the colors beneath the stroke and mask all contiguous **pixels** . Magic Mask can also select colors in noncontiguous areas of an image. Also, it can produce **variable - density** masks based on the average value of selected colors. MaskPro does not have such intelligent...

11/3,K/10
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00104207 DOCUMENT TYPE: Review

PRODUCT NAMES: Magic Mask 1.0 (676713)

TITLE: MagicMask 1.0 good for easy jobs
AUTHOR: Fraser, Bruce
SOURCE: MacWEEK, v11 n41 p11(2) Oct 27, 1997
ISSN: 0892-8118
HOMEPAGE: http://www.macweek.com

RECORD TYPE: Review
REVIEW TYPE: Review

GRADE: B

REVISION DATE: 20001130

...addicts will find Chroma Graphics' MagicMask 1.0 of value if only for its great **Density** tool. Masking is one of the most difficult jobs that digital imagers do, and PhotoShop's tools are not nearly as good as MagicMask's for this task. The **Density** tool produces a quality of mask that is nearly unattainable with Photoshop's tools. Those...
...an HSV (hue, saturation, value) interface. The Color Brushes are aided by a pair of **Pixel** Brushes that are very useful for refining edges or working where the color of the...

...automatic edge detection. Along with Magic Lasso, MagicMask features Regular Marquee and Lasso tools. The **Density** tool creates **variable** -opacity masks based on color ranges. When the user is done trying a technique, MagicMask...

11/3,K/11
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00079733 DOCUMENT TYPE: Review

PRODUCT NAMES: FullPixelSearch 1.5 (573817)

TITLE: FullPixelSearch 1.5
AUTHOR: Seiter, Charles
SOURCE: Macworld, v12 n7 p79(1) Jul 1995
ISSN: 0741-8647
HOMEPAGE: http://www.macworld.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: B

REVISION DATE: 20001130

...imaging. Scientific images often use false colors, for example, a set of colors may represent **different density** numbers or temperatures. The software can analyze images a single **pixel** at a time or in larger **pixel** blocks. The software is useful for generating **pixel** -statistic reports. Using **pixel** selection functions, users select a group of **pixels** as a match set. The program will scan the entire image a **pixel** at a time, and generate a text-based report showing the **pixels** ' index values and whether they fall within the value of the match set. This capability...

11/3,K/12
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00078269 DOCUMENT TYPE: Review

PRODUCT NAMES: Maptitude 3.0 (565491)

TITLE: Maptitude offers GIS aptitude at low cost
AUTHOR: Marshall, Patrick
SOURCE: InfoWorld, v17 n21 p92(1) May 22, 1995

ISSN: 0199-6649
HOMEPAGE: http://www.infoworld.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

REVISION DATE: 20030330

...to make, and data can be conveniently displayed on the maps. Users can create several **different** types of thematic maps, such as **dot - density** , ranged-fill, and bivariant. Its charting tools are very useful for creating attractive displays. The...
?

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File 344:Chinese Patents Abs Aug 1985-2003/Nov
         (c) 2003 European Patent Office
File 347:JAPIO Oct 1976-2003/Sep(Updated 040105)
         (c) 2004 JPO & JAPIO
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200408
         (c) 2004  Thomson Derwent
? ds

Set     Items   Description
S1      79436   (DIFFERENT OR CHANG? OR VARY??? OR ADAPTIVE? OR VARIABLE OR
             VARIES) AND DENSIT?
S2     180423   DOT OR PIXEL? OR (PICTURE OR PICTORIAL)(3N)ELEMENT OR PEL -
             OR DPI OR DOTS()PER()INCH
S3      16842   (VARIABLE OR VARYING OR CHANGING OR ADAPTIVE?) AND (THRESH-
             OLD? OR DITHER? OR TONE()CURVE? OR THRESHOLD()TABLE OR THRESH-
             OLD()MEMORY)
S4       1946   INPUT()(TONE? OR GRADATION? OR COLOR? OR INK?? OR COLORANT?
              OR COLOURANT? OR COLOUR?)
S5       1938   ERROR()(DIFFUSION? OR DISPERSION? OR SPREAD? OR DISTRIBUT?)
S6    1043536   IC=(B41J? OR H04N?)
S7          0   S1 AND S2 AND S3 AND S4
S8       5288   S1 AND S2
S9        285   S8 AND S3
S10        27   S9 AND S5
S11        27   S10 AND S6
S12         5   S11 AND AD=19980626:20040204/PR
S13        22   S11 NOT S12
S14        22   IDPAT (sorted in duplicate/non-duplicate order)
S15        21   IDPAT (primary/non-duplicate records only)
S16        82   S1 AND (DOT OR DOTS) AND S3
S17         0   S16 AND S4
S18        52   S16 AND (TONE? OR GRADATION? OR COLOR? OR INK?? OR COLORAN-
               T? OR COLOURANT? OR COLOUR?)
S19        24   S18 AND PRINT?
S20        21   S19 NOT S11
S21        21   S20 AND S6
S22         3   S21 AND AD=19980626:20040204/PR
S23        18   S21 NOT S22
S24        18   IDPAT (sorted in duplicate/non-duplicate order)
S25        18   IDPAT (primary/non-duplicate records only)
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15/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012415499 **Image available**
WPI Acc No: 1999-221607/199919
XRPX Acc No: N99-164444
Image digitization method for printer - involves changing **pattern of digitizing error sequence in main scanning direction caused in** pixel **of minimum** density **, into array pattern**
Patent Assignee: BROTHER KOGYO KK (BRER)
Inventor: YOSHIDA Y
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 11055513	A	19990226	JP 97213502	A	19970807	199919	B
US 6185006	B1	20010206	US 98129607	A	19980805	200109	

Priority Applications (No Type Date): JP 97213502 A 19970807
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 11055513	A		13	H04N-001/403	
US 6185006	B1			H04N-001/405	

... **involves** changing **pattern of digitizing error sequence in main scanning direction caused in** pixel **of minimum** density **, into array pattern**

...Abstract (Basic): The pattern of a digitizing error sequence in a main scanning direction caused in the **pixel** of minimum **density** is **changed** into an array pattern. The binary **pixel** of the minimum **density** is digitized in an OFF state. DETAILED DESCRIPTION - Each **pixel** is digitized to an ON or OFF state by comparing each **pixel density** with a **threshold** value. The digitizing error is diffused in a non-binary **pixel** when digitizing each **pixel** . INDEPENDENT CLAIMS are also included for the following:image digitizing apparatus; and a recording medium...

...may reduce quality of image since there is no allocation of uniform error to each **pixel** . Prevents transfer of **pixel density** to area of intermediate **density** between minimum **density** and maximum **density** . DESCRIPTION OF DRAWING(S) - The figure shows the partial flowchart of an **error diffusion** process...
...Title Terms: **CHANGE** ;
International Patent Class (Main): **H04N-001/403** ...

... **H04N-001/405**
International Patent Class (Additional): **B41J-002/52** ...

15/3,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

010668860 **Image available**
WPI Acc No: 1996-165814/199617
XRPX Acc No: N96-139356
Image processor for digital electrophotography copier, or heat transfer printer - performs digitisation processing based on variable threshold **value and concerned** pixel **output** density
Patent Assignee: BROTHER KOGYO KK (BRER)

Inventor: NOMURA M
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8046784	A	19960216	JP 94175311	A	19940727	199617	B
US 5661570	A	19970826	US 95506567	A	19950725	199740	

Priority Applications (No Type Date): JP 94175311 A 19940727
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8046784	A		12	H04N-001/403	
US 5661570	A		27	H04N-001/405	

... **performs digitisation processing based on** variable threshold **value and concerned** pixel **output** density

...Abstract (Basic): The image processor digitises half tone image and produces image data with pseudo half tone. **Error diffusion** technique is adopted, thereby distributing errors to the surrounding **pixels** . The errors are generated when digitising the image...

...The **threshold** value (Tvar) for image digitisation, is computed based on the concerned **pixel** input **density** value (I). The correction **density** (I') is obtained by adding error sum (E) to the value (I). This value and the **threshold** value are compared and thus output **density** value (O) is determined. Finally, digitisation processing is carried out...

...USE/ADVANTAGE - In ink jet type printer. Produces image data even if image data **changes** abruptly...

...Abstract (Equivalent): the half-tone image, the multilevel image data comprising a number of sets of multilevel **pixel** data each set of which represents one of more than two color values as a first color value indicating a color of a corresponding one of a number of **pixels** of the half-tone image, and is processed into a corresponding one of a number of sets of bilevel **pixel** data of the bilevel image data so that said corresponding one set of bilevel **pixel** data represents one of two color values as a second color value indicating a color of a corresponding one of a number of **pixels** of the bilevel image, the apparatus comprising...

...data processing means for processing said each set of multilevel **pixel** data into said corresponding one set of bilevel **pixel** data, by an **error diffusion** process wherein an error value occurring in processing said each set of multilevel **pixel** data into said corresponding one set of bilevel **pixel** data is distributed to at least one first **pixel** which neighbors said corresponding one **pixel** of the half-tone image and corresponds to at least one set of multilevel **pixel** data yet to be processed by said data processing means, said data processing means processing said each set of multilevel **pixel** data into said corresponding one set of bilevel **pixel** data, by employing a **threshold** value which is **variable** depending upon said each set of multilevel **pixel** data...

...wherein said data processing means comprises means for employing said **variable threshold** value when said first color value falls within a first range of said more than two color values, and employing, in place of said **variable threshold** value, a predetermined **threshold** value when said first color value falls within a second range of said more than...

...Title Terms: **VARIABLE** ;

International Patent Class (Main): **H04N-001/403** ...

... **H04N-001/405**
International Patent Class (Additional): **B41J-002/52** ...

15/3,K/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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010414086 **Image available**
WPI Acc No: 1995-315400/199541
XRPX Acc No: N95-238345
Image processing method for facsimile, image scanner - involves calculating digitisation error of concerned pixel **by comparing digitalised value and reference values which can be set variably**
Patent Assignee: MITA IND CO LTD (MTAI)
Inventor: AZUMAI H; HIKOSAKA A; IWATSUBO S; KAJITANI T
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 7212592	A	19950811	JP 942199	A	19940113	199541	B
US 5519509	A	19960521	US 95367832	A	19950103	199626	

Priority Applications (No Type Date): JP 942199 A 19940113
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 7212592	A		8	H04N-001/405	
US 5519509	A		11	H04N-001/405	

... **involves calculating digitisation error of concerned** pixel **by comparing digitalised value and reference values which can be set variably**

...Abstract (Basic): The method involves the digitisation of the value of a concerned **pixel** . The digitalised errors that is distributed from the surrounding **pixels** are added and are integrated as an accumulated error value. The digitisation value is calculated and is compared with a **threshold** value (TH). As a result, the a concerned **pixel** is decided as a black or a white **pixel** .
...

...The digitisation error (HG) of the concerned **pixel** is calculated by comparing the digitalised value and the reference values (GSLVB,GSLVW) which can...

...ADVANTAGE - Regulates reproduced half-tone image **density** ; provides more suitable image processing
...Abstract (Equivalent): An image processing method utilizing an **error diffusion** technique, comprising the steps of...

...a) distributing binary-coding errors, generated when multivalued **density** data of respective **pixels** of an image are converted into binary-coded data, to peripheral **pixels** having a predetermined positional relation with respect to the respective **pixels** ;
(...

...b) calculating an error sum by adding up binary-coding errors distributed to an object **pixel** from peripheral **pixels** around the object **pixel** ;
(...

...c) comparing an addition result obtained by adding a **density** value of the object **pixel** to the error sum calculated for the object **pixel** with a predetermined binary-coding **threshold** value, and obtaining binary-coded **density** data of the object **pixel** based on a comparison result; and...

...d) comparing the addition result obtained by adding the **density** value of the object **pixel** to the error sum calculated for the object **pixel** with predetermined reference values which can be variably set, and calculating a binary-coding error for the object **pixel** .

...Title Terms: **PIXEL** ;
International Patent Class (Main): **H04N-001/405**
...International Patent Class (Additional): **H04N-001/403**

15/3,K/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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009609433
WPI Acc No: 1993-302981/199338
XRPX Acc No: N93-233053
Image quantisation with lossy adaptive error diffusion - **adding error term to each** pixel **in image to derive modified optical** density **value for** pixel , **determining output** density **value, and determining difference between determined and modified** density **values**
Patent Assignee: XEROX CORP (XERO)
Inventor: ESCHBACH R; MAILLOUX L D
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5245678	A	19930914	US 91811271	A	19911220	199338	B
JP 5308515	A	19931119	JP 92353079	A	19921211	199351	

Priority Applications (No Type Date): US 91811271 A 19911220
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5245678	A		16	G06K-009/38	
JP 5308515	A			H04N-001/40	

Image quantisation with lossy adaptive error diffusion - ...

...**adding error term to each** pixel **in image to derive modified optical** density **value for** pixel , **determining output** density **value, and determining difference between determined and modified** density **values**

...Abstract (Basic): The **pixel** quantisation method involves having gray level **pixel** values in an image, where each **pixel** value represented by c levels are quantized by applying a **threshold** level to each **pixel** value in the image to produce a **pixel** value having d levels, and applying a weighted portion of the value of the difference (the error) between the **pixel** value and the **thresholded** value to a predetermined set of neighbouring **pixels** . For each neighbouring **pixel** in the predetermined set to which the error term is to be applied, the value of the neighbouring **pixel** is compared to each possible legal output value, and if any **pixel** value the predetermined set of neighbouring **pixels** is equal to one of the legal output values, then the error term is not...

...If all the neighbouring **pixels** have legal values, a decision is made based on a look-ahead neighbourhood (a set of **pixels** used to determine the fractional error allocation) as to whether the error term is discarded or preserved. In the most simple case, the look-ahead neighbourhood is identical to the **error distribution** neighbourhood and the error term is discarded when all of the neighbouring **pixels** have legal output values...

...USE/ADVANTAGE - for quantising gray data. Large number of possible levels of optical **density** redefined at one of smaller number of optical **density** .

...Title Terms: **PIXEL** ;
...International Patent Class (Main): **H04N-001/40**

15/3,K/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

009533354 **Image available**
WPI Acc No: 1993-226895/199328
XRPX Acc No: N93-174210
Quantising image pixel **values by digital half-toning and** error diffusion **- comparing input gray level for full dots over halftone cell with output halftone** dot **, adding error derivation and** varying **output grey level**
Patent Assignee: XEROX CORP (XERO)
Inventor: FAN Z
Number of Countries: 002 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5226096	A	19930706	US 91775201	A	19911011	199328	B
JP 5219377	A	19930827	JP 92289536	A	19921002	199339	
JP 3247737	B2	20020121	JP 92289536	A	19921002	200207	

Priority Applications (No Type Date): US 91775201 A 19911011
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5226096	A		11	G06K-009/38	
JP 5219377	A			H04N-001/40	
JP 3247737	B2		9	H04N-001/40	Previous Publ. patent JP 5219377

Quantising image pixel **values by digital half-toning and** error diffusion **- ...**

...**comparing input gray level for full dots over halftone cell with output halftone** dot **, adding error derivation and** varying **output grey level**

...Abstract (Basic): The method involves quantising **pixel** values in an image formed by **pixels** , each representing an optical **density** of the image at a location within the image, and having an original optical **density** value selected from one of a set of 'c' original optical **density** values that has a number of members larger than a desired output set of 'd' optical **density** values through a process of halftoning and **error diffusion** . An image is processed in accordance with a half-tone or **dithering** process. The resulting halftone **dot** is compared to a set of legal or full halftone dots, for a determination of whether the **dot** is a full or partial **dot** .
...

...derived, by comparing the input gray level over the halftone cell, with the output halftone **dot** . Error derived from previous **dot** processing, is added to the error derivation, and the level of gray output is varied...

...accordance with a total error so derived. Error occurring in the output of the full **dot** is passed to a set of neighbouring dots
...Title Terms: **PIXEL** ;
...International Patent Class (Main): **H04N-001/40**
...International Patent Class (Additional): **H04N-001/405**

15/3,K/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

009483732 **Image available**
WPI Acc No: 1993-177267/199322
XRPX Acc No: N93-135853
Quantisation of image pixel **values - modifying** pixel **value by weighted error correction factor and comparing with** adaptively **determined** threshold **value based on** dither **pattern**
Patent Assignee: XEROX CORP (XERO)
Inventor: ESCHBACH R
Number of Countries: 006 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 544511	A2	19930602	EP 92310761	A	19921125	199322	B
CA 2077278	A	19930528	CA 2077278	A	19920901	199333	
US 5268774	A	19931207	US 91800811	A	19911127	199350	
JP 5308514	A	19931119	JP 92333520	A	19921119	199351	
EP 544511	A3	19940216	EP 92310761	A	19921125	199518	
CA 2077278	C	19970128	CA 2077278	A	19920901	199716	
EP 544511	B1	19970702	EP 92310761	A	19921125	199731	
DE 69220651	E	19970807	DE 620651	A	19921125	199737	
			EP 92310761	A	19921125		

Priority Applications (No Type Date): US 91800811 A 19911127
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 544511	A2	E	18		
Designated States (Regional): DE FR GB					
US 5268774	A		19		
EP 544511	B1	E	19		
Designated States (Regional): DE FR GB					
DE 69220651	E				Based on patent EP 544511

Quantisation of image pixel **values**...

...**modifying** pixel **value by weighted error correction factor and comparing with** adaptively **determined** threshold **value based on** dither **pattern**

...Abstract (Basic): The **pixel** value quantisation method involves modifying (10) each **pixel** (18) by a correspondingly weighted error correction term (20,22,24) or terms from previously processed **pixels** . The modified value is compared to an **adaptively** determined (15) **threshold** value based on a **dither** pattern and on the value of the **pixel** to be **thresholded** multiplied by a value representing an edge enhancement factor...
...The difference between the modified value (12) and the output **pixel**

value (16) is distributed on a weighted basis to a set of neighbouring unprocessed **pixels** . The set of **threshold** values describe a halftone cell...

...ADVANTAGE - Reduces ''banding'' and production of isolated black and/or white **pixels** which are non-printable by many types of printer. Halftoning with enhanced dynamic range and edge enhanced **error diffusion** .

...Abstract (Equivalent): A method of quantizing **pixel** values in an original image formed by a plurality of **pixels** , each **pixel** (Inl) representing an optical **density** of the image at allocation (n, l) within the image, the method comprising the steps of: a) inputting a **pixel** (inl) having an original optical **density** value associated therewith selected from one of a set of c original optical **density** values; b) applying a **threshold** level (Tn,l) to each optical **density** value of each **pixel** to produce an output **density** value (Bnl) which is a member of a desired output set of a d optical **density** values, the number of **density** values in original set, c. being larger than that of the desired output set d. c) determining an error term (enl; Dnl) for each **pixel** ; d) applying a proportional amount of the determined error term (ene; Dn, e) for each of a predetermined set of neighbouring **pixels** (In+1, l, 1n-1, l+1, in, l+1, In+1, l+1); and e) outputting the set d of optical **density** values, each member of the set d being a legal output value; characterised in that step b) includes the step of determining a **threshold** level (Tn,l) for each **pixel** which is a function of the original optical **density** of the **pixel** (1n,l) the proportional amount of the determined error term (en,l; Dn,l) assigned to that **pixel** from its neighbouring **pixels** and a **threshold** value (fMn, l) which is selected from a set of **threshold** values having a dynamic range greater than that of the original image...

...Abstract (Equivalent): A **pixel** , defined by one of a large number of possible levels of optical **density** , is redefined at one of a smaller number of levels of optical **density** , using an edge enhancing **error diffusion** algorithm with a **threshold** set in accordance with a **dither** matrix of large dynamic range...

...The modified **pixel** value is compared with a **threshold** value determined **adaptively** based on a **dither** pattern having a dynamic range greater than 1 and the value of the **pixel** to be subjected to the **threshold** and, optionally, on its predetermined neighbourhood, multiplied by a value representing an edge enhancement factor. The difference value between the modified pied value and the output **pixel** value is distributed in accordance with a weighted distribution scheme to a set of neighbouring unprocessed **pixels** , increasing or decreasing the gray values of such **pixels** .

...

...USE/ADVANTAGE - Quantising gray data using half-toning with enhanced dynamic range and edge enhance **error diffusion** .

...Title Terms: **PIXEL** ;
International Patent Class (Main): **H04N-001/40** ...
... **H04N-001/405**
...International Patent Class (Additional): **H04N-001/41**

15/3,K/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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009131712 **Image available**
WPI Acc No: 1992-259151/199231
XRPX Acc No: N92-197700

Digital half-tone system using error diffusion **- diffuses error terms to neighbourhood** pixels **which include components that are periodic w.r.t. wavelength that is function of** density **level of** pixels **from which error terms are diffused**

Patent Assignee: CACTUS (CACT-N); MINNESOTA MINING & MFG CO (MINN)
Inventor: BOWERS H
Number of Countries: 034 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5130823	A	19920714	US 91722592	A	19910627	199231	B
WO 9300656	A1	19930107	WO 92US3729	A	19920505	199304	
AU 9219932	A	19930125	AU 9219932	A	19920505	199319	
EP 591274	A1	19940413	EP 92912198	A	19920505	199415	
			WO 92US3729	A	19920505		
JP 7501428	W	19950209	WO 92US3729	A	19920505	199515	
			JP 93501450	A	19920505		
EP 591274	B1	19990714	EP 92912198	A	19920505	199932	
			WO 92US3729	A	19920505		
DE 69229599	E	19990819	DE 629599	A	19920505	199939	
			EP 92912198	A	19920505		
			WO 92US3729	A	19920505		
CA 2112469	C	20010227	CA 2112469	A	19920505	200115	
			WO 92US3729	A	19920505		

Priority Applications (No Type Date): US 91722592 A 19910627
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5130823	A		18	G06K-009/40	
WO 9300656	A1	E	24	G06K-009/40	
Designated States (National): AU BB BG BR CA FI HU JP KP KR LK MG MW NO PL RO RU SD US					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LU MC NL OA SE					
AU 9219932	A			G06K-009/40	Based on patent WO 9300656
EP 591274	A1	E	24	G06K-009/40	Based on patent WO 9300656
Designated States (Regional): DE FR GB IT					
JP 7501428	W		1	H04N-001/405	Based on patent WO 9300656
EP 591274	B1	E		H04N-001/40	Based on patent WO 9300656
Designated States (Regional): DE FR GB IT					
DE 69229599	E			H04N-001/40	Based on patent EP 591274
					Based on patent WO 9300656
CA 2112469	C	E		H04N-001/387	Based on patent WO 9300656

Digital half-tone system using error diffusion **- ...**

...**diffuses error terms to neighbourhood** pixels **which include components that are periodic w.r.t. wavelength that is function of** density **level of** pixels **from which error terms are diffused**

...Abstract (Basic): The apparatus comprises a scanner for scanning the original image to detect the **density** levels of **pixels** or blocks of **pixels** within a predetermined range of optical wavelengths. The **density** level of each of a number of **pixels** or blocks of **pixels** are added and scanned to give an error correction term to provide a

corrected **density** level for the **pixel** or block of **pixels** . The corrected **density** level of each **pixel** or block of **pixel** is added to a predetermined **thres**hold . A bi-level output corresponding to the **pixel** or block of **pixels** to convert said **pixel** or block is provided...

...This **threshold** is chosen from a number of randomly **variable** **threshold** values evenly distributed around a predetermined value. The apparatus also derives from the corrected **density** level of each of **pixels** or block or **pixels** and the bi-level output error correction terms of such **pixels** or block of **pixels** for distribution to at least two neighbourhood **pixels** or block of **pixels** of such **pixel** or block of **pixels** . For at least one converted **pixel** or block of **pixels** whose **density** level or corrected **density** level is in a predetermined range, the correction term of such **pixel** or block has a component that **varies** with respect to the position of the **pixel** or block of **pixels** and that is periodic with respect to a wavelength which is a function of the **density** level or corrected **density** level of the **pixel** or block...

...The apparatus comprises a scanner for scanning the original image to detect the **density** levels of **pixels** or blocks of **pixels** within a predetermined range of optical wavelengths. The **density** level of each of a number of **pixels** or blocks of **pixels** are added and scanned to give an error correction term to provide a corrected **density** level for the **pixel** or block of **pixels** . The corrected **density** level of each **pixel** or block of **pixel** is added to a predetermined **threshold** . A bi-level output corresponding to the **pixel** or block of **pixels** to convert said **pixel** or block is provided...

...This **threshold** is chosen from a number of randomly **variable** **threshold** values evenly distributed around a predetermined value. The apparatus also derives from the corrected **density** level of each of **pixels** or block or **pixels** and the bi-level output error correction terms of such **pixels** or block of **pixels** for distribution to at least two neighbourhood **pixels** or block of **pixels** of such **pixel** or block of **pixels** . For at least one converted **pixel** or block of **pixels** whose **density** level or corrected **density** level is in a predetermined range, the correction term of such **pixel** or block has a component that **varies** with respect to the position of the **pixel** or block of **pixels** and that is periodic with respect to a wavelength which is a function of the **density** level or corrected **density** level of the **pixel** or block...

...Title Terms: **PIXEL** ;

...International Patent Class (Main): **H04N-001/387** ...

... **H04N-001/40** ...

... **H04N-001/405**

15/3,K/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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009006764 **Image available**
WPI Acc No: 1992-134069/199217
XRPX Acc No: N92-100047

Image conversion method with error diffusion **- involves making gray image data print-ready by reducing number of bits defining each** pixel

to valid output state
Patent Assignee: XEROX CORP (XERO)
Inventor: ESCHBACH R
Number of Countries: 006 Number of Patents: 010
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 481812	A	19920422	EP 91309640	A	19911018	199217 B
CA 2049393	A	19920420	CA 2049393	A	19910816	199228
JP 4299470	A	19921022	JP 91264987	A	19911014	199249
US 5208871	A	19930504	US 90600542	A	19901019	199319
			US 92820713	A	19920114	
US 5226094	A	19930706	US 90600542	A	19901019	199328
			US 92821125	A	19920114	
EP 481812	A3	19921209	EP 91309640	A	19911018	199344
EP 481812	B1	19980107	EP 91309640	A	19911018	199806
DE 69128599	E	19980212	DE 628599	A	19911018	199812
			EP 91309640	A	19911018	
CA 2049393	C	19990316	CA 2049393	A	19910816	199929
JP 3112316	B2	20001127	JP 91264987	A	19911014	200102

Priority Applications (No Type Date): US 90600542 A 19901019; US 92820713 A 19920114; US 92821125 A 19920114
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 481812	A	E	14		
Designated States (Regional): DE FR GB					
CA 2049393	A			G06F-015/66	
JP 4299470	A		11	G06F-015/66	
US 5208871	A		12	G06K-009/36	Div ex application US 90600542
US 5226094	A		12	G06K-009/36	Cont of application US 90600542
EP 481812	B1	E	15	H04N-001/41	
Designated States (Regional): DE FR GB					
DE 69128599	E			H04N-001/41	Based on patent EP 481812
CA 2049393	C			G06T-003/40	
JP 3112316	B2		12	G06T-005/00	Previous Publ. patent JP 4299470

Image conversion method with error diffusion - ...
...**involves making gray image data print-ready by reducing number of bits defining each** pixel **to valid output state**

...Abstract (Basic): scan are distinct, the aperture sees areas which may correspond to more than a single **pixel** on the original image, and thereby may derive a signal that is grey, i.e...

...ADVANTAGE - The method does not require the formation of blocks from individual **pixels** and allows for better preservation of fine detail ...
...Abstract (Equivalent): scan are distinct, the aperture sees areas which may correspond to more than a single **pixel** on the original image, and thereby may derive a signal that is grey, i.e...

...ADVANTAGE - The method does not require the formation of blocks from individual **pixels** and allows for better preservation of fine detail ...
...Abstract (Equivalent): scan'' are distinct, the aperture ''sees'' areas which may correspond to more than a single **pixel** on the original image, and thereby may derive a signal that is gray, i.e...

...The gray image data, which may be definable at several bits per **pixel** , is then made print-ready by reducing the number of bits defining each

pixel to a valid output state (0,1 for a typical binary printer, 0,1,2,3 for a quaternary printer, etc.). The reduction step is accomplished through **error diffusion** methods that maintain the local area gray **density** level. In colour applications, each of the bitmaps representing a colour separation, be it 2...

...ADVANTAGE - Does not require formation of blocks from individual **pixels** and allows better preservation of fine detail...

...scan'' are distinct, the aperture ''sees'' areas which may correspond to more than a single **pixel** on the original image, and thereby may derive a signal that is gray, i.e...

...The gray image data, which may be definable at several bits per **pixel** , is then made print-ready by reducing the number of bits defining each **pixel** to a valid output state. The reduction is accomplished by an **adaptive error diffusion** method, in which a **threshold** error is directed only to members of a set of error receiving **pixels** already having a valid output state. When all the **pixels** have a valid output state, error is directed to those **pixels** in accordance with a standard **error diffusion** method...
...Title Terms: **PIXEL** ;
...International Patent Class (Main): **H04N-001/41**
...International Patent Class (Additional): **H04N-001/387** ...

... **H04N-001/40** ...

... **H04N-001/405**

15/3,K/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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008815542 **Image available**
WPI Acc No: 1991-319555/199144
XRPX Acc No: N91-244952
Half tone image data processing system for digital copier or facsimile - uses Laplacian calculation to modify original, image data, and produces modified object pixel **data relating to** density **difference**
Patent Assignee: FUJITSU LTD (FUIT)
Inventor: ITOH S
Number of Countries: 004 Number of Patents: 009
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 454495	A	19911030	EP 91303820	A	19910426	199144	B
JP 4026277	A	19920129	JP 90130701	A	19900521	199211	
JP 4035163	A	19920205	JP 90133847	A	19900525	199212	
JP 4035166	A	19920205	JP 90133851	A	19900525	199212	
JP 4008063	A	19920113	JP 90111320	A	19900426	199214	
US 5208684	A	19930504	US 91690574	A	19910424	199319	
EP 454495	B1	19960207	EP 91303820	A	19910426	199610	
DE 69116924	E	19960321	DE 616924	A	19910426	199617	
			EP 91303820	A	19910426		
KR 9506440	B1	19950615	KR 916752	A	19910426	199713	

Priority Applications (No Type Date): JP 90133851 A 19900525; JP 90111320 A 19900426; JP 90130701 A 19900521; JP 90133847 A 19900525
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes

JP 4026277	A	7		
JP 4035163	A	10		
JP 4035166	A	10		
JP 4008063	A	8		
US 5208684	A	18	G06K-009/34	
EP 454495	B1 E	25	H04N-001/40	
DE 69116924	E		H04N-001/40	Based on patent EP 454495
KR 9506440	B1		H04N-001/40	

... **uses Laplacian calculation to modify original, image data, and produces modified object** pixel **data relating to** density **difference**

...Abstract (Basic): The half-tone image processing system includes storage for sets of data of original image **pixels** comprising data on the object **pixel** and data on adjacent **pixels** . From these sets of data a Laplacian calculation unit produces modified object **pixel** data. A binary coding unit compares the value of the object **pixel** data with a **threshold** value which is fixed or **varies** according to the modified data and outputs. The stored data is modified according to the...

...An error corrector determines an object **pixel** error and compensates for it in processing subsequent data. The Laplacian calculation unit obtains either a black or white signal output using a **variable threshold** .

...Abstract (Equivalent): Image data processing circuitry for processing image data items, representative of the respective **density** values of **pixels** making up an original image, to derive output data items for determining the **density** values of **pixels** making up a corresponding binary output image, which circuitry includes: storage means (11) for storing successive sets of such image data items relating respectively to such original image **pixels** , each of which sets is made up of a data item (Dm,n) relating to an object **pixel** and further data items (Dm-1,n-1,...,Dm+1,n+1) relating respectively to peripheral **pixels** , adjacent to the said object **pixel** ; calculation means (12) connected to the said storage means (11) and operable to receive image data items of such a stored set and to produce a modified object **pixel** data item (Dm,n') derived from the said image data item (Dm,n) relating to the said object **pixel** of the set in dependence upon the respective differences in **density** values between that object **pixel** image data item (Dm,n) and such further data items (Dm-1-n, Dm,n...

...1,n) of the set concerned; comparison means (13) connected to receive the modified object **pixel** data item (Dm,n') and operable to compare the **density** value of that data item (Dm,n') with a preset **threshold** value (TH1) and, in dependence upon the result of such comparison, to determine such an output data item (Om,n) corresponding to the object **pixel** concerned; and error correction means (14,15) operable to determine an object **pixel** error (Em,n) representative of the difference in **density** values between the said modified object **pixel** data item (Dm,n') and the determined output data item (Om,n) and operable also...

...means (11) so as to enable the circuitry to compensate for such a determined object **pixel** error when processing a subsequent set of such image data items...

...Abstract (Equivalent): A half-tone image processing system has a unit for storing **density** data of each **pixel** of an original image. A Laplacian calculation unit, operatively connected to the **density** data storage unit, reads out **density** data from the **density** data storage

unit. A Laplactian calculation is performed on an object **pixel** and on peripheral **pixels** around the object **pixel** to obtain corrected data. The Laplacian calculation is performed in such a manner that a difference in **density** between the object **pixel** and each of the peripheral **pixels** is calculated and all the differences are summed. A binary-coding unit compares the corrected data with a fixed **threshold** value to obtain binary-coded data indicating either black or white colour in accordance with the **threshold** value. An error calculation unit determines a difference between the corrected data and the binary-coded data to obtain a binary-coded error. An **error distribution** unit receives the binary-coded error and an **error diffusion** matrix to weight and diffuse the **density** data of each **pixel** and calculate a weighted binary-coded error of each **pixel** based on the corresp. A calculation unit adds the weighed binary-coded error to the **density** data of each peripheral **pixel** and outputs the corrected **density** data to the **density** data storage unit to rewrite the original **density** data. USE - Image processing system for obtaining pseudo half-tone image for digital image processing...

...Title Terms: **PIXEL** ;
...International Patent Class (Main): **H04N-001/40**
International Patent Class (Additional): **B41J-002/36** ...

15/3,K/10 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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008293597 **Image available**
WPI Acc No: 1990-180598/199024
Related WPI Acc No: 1991-319511
XRPX Acc No: N90-140348

Enhancement method for ink jet colour imaging systems - determining in sequence max. amount of ink for each area to be printed and diffuses excess into surrounding area

Patent Assignee: HEWLETT-PACKARD CO (HEWP)
Inventor: BEARSS J G; CHAN C S; NELSON T M; BEARSS J; CHAN C; NELSON T
Number of Countries: 007 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 372826	A	19900613	EP 89312460	A	19891130	199024	B
US 4930018	A	19900529	US 88278881	A	19881202	199025	
JP 2188263	A	19900724	JP 89313118	A	19891201	199035	
EP 372826	A3	19920415	EP 89312460	A	19891130	199328	
CA 1322891	C	19931012	CA 613607	A	19890927	199347	
EP 372826	B1	19960306	EP 89312460	A	19891130	199614	
DE 68925871	E	19960411	DE 625871	A	19891130	199620	
			EP 89312460	A	19891130		

Priority Applications (No Type Date): US 88278881 A 19881202
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 372826	A				
Designated States (Regional): DE FR GB IT					
EP 372826	B1	E	21	H04N-001/40	
Designated States (Regional): DE FR GB IT					
DE 68925871	E			H04N-001/40	Based on patent EP 372826
CA 1322891	C			H04N-001/34	

...Abstract (Basic): converted to a hard copy printout by ejecting ink onto a print medium in a **pixel** address sequence. As areas are printed, for each selected area, scanned image data is used...

...Abstract (Equivalent): information to a hardcopy printout which employs ink drops ejected onto a print medium in **pixels** determined by gray scale digital numbers assigned to said scanned image information, said method including...

...of: a) scanning (10,20) an image to provide at least two colour planes of **pixel** information of colours existent in said image; (b) assigning (22) said **pixel** information an ink drop count number corresponding to a gray scale value; (c) comparing (28) the sum of ink drop count numbers for each essentially coincident **pixel** in each of said at least two colour planes to a predetermined allowable ink drop...

...a predetermined maximum allowable volume of ink, Vmax; (d) identifying (30,52) the colour plane **pixel** of said essentially coincident **pixels** having the largest ink drop count number when the sum of ink drop count numbers...

...e) decrementing (32,62) the ink drop count number associated with said identified colour plane **pixel** having the largest ink drop count number to create an adjusted ink drop count number...

...Abstract (Equivalent): media printed by ink jet printing. The method involves determining the maximum allowable ink print **density** necessary to reduce or eliminate paper cockleing in the printed media and then providing tight...

...scale ink drop count and associated dye loading in relation to this maximum allowable print **density** . **Pixels** are selected and printed to maximize the uniformity of ink distribution on the printed media...

... **Variable** drop size or a fixed drop size with **variable** dye loadings is used. **Error diffusion** or **dithering** schemes can be combined with it

International Patent Class (Main): **H04N-001/34** ...

... **H04N-001/40**

International Patent Class (Additional): **B41J-002/21** ...

... **H04N-001/46**

15/3,K/11 (Item 11 from file: 347)

DIALOG(R)File 347:JAPIO

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07725270 **Image available**

HALFTONE **DOT** AREA **CHANGING** METHOD AND PROGRAM THEREOF

PUB. NO.: 2003-219171 [JP 2003219171 A]
PUBLISHED: July 31, 2003 (20030731)
INVENTOR(s): NARASAKI MINORU
KITAGAWA OSAMU
APPLICANT(s): DAINIPPON SCREEN MFG CO LTD
APPL. NO.: 2002-015493 [JP 200215493]
FILED: January 24, 2002 (20020124)

HALFTONE **DOT** AREA **CHANGING** METHOD AND PROGRAM THEREOF

INTL CLASS: **H04N-001/405** ; **B41J-002/52** ; G06T-005/00; **H04N-001/40** ; **H04N-001/407**

ABSTRACT

PROBLEM TO BE SOLVED: To provide a halftone **dot** area **changing** method allowing a halftone **dot** area to be **changed** (halftone to be **changed**) for halftone **dot** image data that has undergone a RIP processing.
SOLUTION: In step S1, binarized halftone **dot** image data, which has previously undergone the RIP processing, is decompressed to prepare for generation of multivalued halftone **dot** image data. In step S2, the decompressed halftone **dot** image data is processed through an averaging mask, thereby converting the same to corresponding multivalued halftone **dot** image data having **varying** levels of gray. In step S4, the multivalued halftones are converted based on a predetermined **tone curve** , thereby thickening or thinning halftone **dot** edge portions by **varying** a **density** thereof. In step S5, based on the corrected gradations, **error diffusion** processing is performed to reproduce halftone gradation dots coarsely or densely, thus achieving a **change** in the halftone **dot** area.

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15/3,K/12 (Item 12 from file: 347)
DIALOG(R)File 347:JAPIO
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07725260 **Image available**
IMAGE FORMING APPARATUS, IMAGE FORMING METHOD, PROGRAM AND RECORDING MEDIUM

PUB. NO.: 2003-219161 [JP 2003219161 A]
PUBLISHED: July 31, 2003 (20030731)
INVENTOR(s): OGAWA TAKESHI
TAKAHASHI HIROSHI
APPLICANT(s): RICOH CO LTD
APPL. NO.: 2002-015863 [JP 200215863]
FILED: January 24, 2002 (20020124)

INTL CLASS: **H04N-001/40** ; **B41J-002/52** ; G06T-005/00

ABSTRACT

...TO BE SOLVED: To eliminate a delay in generating dots in the vicinity of a **changing** part of a quantized output value and a delay in generating dots in a highlight in **error diffusion** processing.

SOLUTION: It is judged whether or not an input value 1 is a prescribed **density** . If the value 1 is the prescribed **density** , a mask adding section 9 adds a noise according to the position of an input **pixel** to the value 1 by referring to a memory storing the appearance position of the noise. A **threshold** amount determining section 10 divides the number of gradations of input into a plurality of sections depending on parts where a gradation step is generated, has **thresholds changed** according to an input value for each of the sections, and sets a **threshold** corresponding to an input value in a quantization section 3.

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15/3,K/13 (Item 13 from file: 347)
DIALOG(R)File 347:JAPIO
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06413919 **Image available**
IMAGE PROCESSOR

PUB. NO.: 11-355577 [JP 11355577 A]
PUBLISHED: December 24, 1999 (19991224)
INVENTOR(s): NAMITSUKA YOSHIYUKI
APPLICANT(s): RICOH CO LTD
APPL. NO.: 10-160761 [JP 98160761]
FILED: June 09, 1998 (19980609)

INTL CLASS: **H04N-001/409** ; G06T-005/00; **H04N-001/407**

ABSTRACT

PROBLEM TO BE SOLVED: To improve gradation and the reproduction of low **density** at a low cost by reproducing the gradation of a **density** -corrected enhancement signal or smoothing signal based on a **density** -corrected **variable threshold** .

SOLUTION: In a **density** correcting part and a gradation correcting part, a **threshold** value **density** -converted by RAM1 6-1 and a γ transformation part (**threshold**) 6-2 is impressed to a **variable** brinatization part 6-3 and image data **density** -converted by RAM2 6-8 and a γ transformation part (**density**) 6-7 is impressed to the **variable** binarization part 6-3, a binary/multilevel **error diffusion** processing part 6-11 a multivalue level conversion part 6-18 and a binary/ multilevel **dither** processing part 6-20. A path for binarizing processing and a path for multilevel processing are provided and at the time of simple binarizing processing, the **threshold** density -converted by the RAM1 6-1 and the γ conversion part (**threshold**) 6-2 is given each **pixel** processing at the part 6-3, a tip **pixel** control part 6-4 and a binary filter 6-5.

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15/3,K/14 (Item 14 from file: 347)
DIALOG(R)File 347:JAPIO
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05740160 **Image available**
IMAGE-PROCESSING UNIT

PUB. NO.: 10-023260 [JP 10023260 A]
PUBLISHED: January 23, 1998 (19980123)
INVENTOR(s): IINO AKIO
MATSUMOTO HISASHI
KATSUMA MAKOTO
APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-172277 [JP 96172277]
FILED: July 02, 1996 (19960702)

INTL CLASS: **H04N-001/405** ; G06T-005/00

ABSTRACT

PROBLEM TO BE SOLVED: To prevent reduction in a binarization processing speed by **changing** a **threshold** level, related to the **error spread** method, based on a **density** of a **pixel** under observation and a spatial differentiation value of surrounding **pixels** , so as to exclude the effect of sweep-out and texture...
... itself, are given to an edge-detection circuit 2, a spatial differentiation value around a **pixel** under observation is calculated thereat, and the result is outputted as a differentiation signal 300...

... differented value signal 300 and the multi-value input signal 100 are given to a **threshold** level-setting circuit 3. In this case, a median and the level of the **threshold** level and a level coefficient to control the level are read from an LUM (lookup matrix), based on the signals. As a result, a **threshold** level signal 400, outputted from a **threshold** level-setting circuit 3 and a sum 800 of the multi-value input signal 100 ...

... 6 and an error signal are given to a binarization circuit 4, in which the **threshold** level signal 400 and the signal 800 are compared, for obtaining a binary output signal...

15/3,K/15 (Item 15 from file: 347)
DIALOG(R)File 347:JAPIO
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05618523 **Image available**
DIGITAL IMAGE READER

PUB. NO.: 09-233323 [JP 9233323 A]
PUBLISHED: September 05, 1997 (19970905)
INVENTOR(s): YOSHIDA TOMOYUKI
APPLICANT(s): RICOH CO LTD [000674] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-058351 [JP 9658351]
FILED: February 20, 1996 (19960220)

INTL CLASS: **H04N-001/40** ; **H04N-001/04**

ABSTRACT

... reproduced image by imparting a decision circuit selecting the binarization processing data due to a **dither** processing or an **error diffusion** to a sub-scanning direction intermediate **density** edge area in an image area separation processing...

...SOLUTION: This device has an image area separation means 2 deciding whether the **picture element** under consideration in an inputted image is a character area or a pattern area and...

... means 2. The image separation means 2 is provided with an edge area detection means **changing** from the white ground background of a sub-scanning direction to intermediate **density** , is provided with a processing means deciding that the edge area is the pattern area...

15/3,K/16 (Item 16 from file: 347)
DIALOG(R)File 347:JAPIO
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05361705 **Image available**
IMAGE PROCESSOR

PUB. NO.: 08-317205 [JP 8317205 A]
PUBLISHED: November 29, 1996 (19961129)
INVENTOR(s): NOMURA MAYUMI
APPLICANT(s): BROTHER IND LTD [000526] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 07-118350 [JP 95118350]

FILED: May 17, 1995 (19950517)

INTL CLASS: **H04N-001/405** ; **B41J-002/52** ; G06T-005/00; **H04N-001/403**

ABSTRACT

PURPOSE: To produce a pseudo halftone image that has the reduced bias of recording **pixels** at the edge parts by **changing** the binarization processing direction for every line and binarizing an input image by an **error diffusion** method when a halftone image is binarized and converted into a pseudo halftone image...

...CONSTITUTION: The binarizing direction is selected for every line. The next marked **pixel** is decided and the input **density** of the marked **pixel** is read out of an image memory 2. At the same time, the **threshold** value T is read out of a ROM 4. Furthermore, the weighted error sum allocated to the marked **pixel** is read out of a RAM 3 and the correction **density** is calculated. Then the value T is compared with the correction **density** and an output signal is decided. This output signal is written in the memory 2. The the binarization error caused in the marked **pixel** is repetitively allocated to the peripheral **pixels** based on the weighting coefficient matrix that is read out of the ROM 4.

15/3,K/17 (Item 17 from file: 347)

DIALOG(R)File 347:JAPIO
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05258659 **Image available**

IMAGE PROCESSING METHOD AND IMAGE PROCESSING UNIT

PUB. NO.: 08-214159 [JP 8214159 A]
PUBLISHED: August 20, 1996 (19960820)
INVENTOR(s): KUWATA NAOKI
APPLICANT(s): SEIKO EPSON CORP [000236] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 07-015122 [JP 9515122]
FILED: February 01, 1995 (19950201)

INTL CLASS: **H04N-001/403** ; **H04N-001/405**

ABSTRACT

PURPOSE: To obtain an excellent binary image by extracting a spatial frequency or a feature **variable** equivalent thereto for each **picture element** from a received image and **changing** a spread matrix in the **error spread** method or a **threshold** level matrix in the **dither** method based on the feature **variable** .

...
... of a binary image is provided with an image identification means 40 comprising a feature **variable** extract means 41 extracting a spatial frequency or a feature **variable** equivalent thereto based on a **density** of the multi-gradation input image and comprising a classification means 42 classifying the received image into some images based on the feature **variable** and providing an output of a classification signal corresponding to each classified image, and with...

... binarizing processing means 30 receiving the classification signal from the image identification means 40 and **changing** the binarizing processing method of the received image depending on the classification signal.

15/3,K/18 (Item 18 from file: 347)
DIALOG(R)File 347:JAPIO
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03919680 **Image available**
IMAGE PROCESSING METHOD

PUB. NO.: 04-284780 [JP 4284780 A]
PUBLISHED: October 09, 1992 (19921009)
INVENTOR(s): NAGASHIMA SUNAO
APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 03-049323 [JP 9149323]
FILED: March 14, 1991 (19910314)
JOURNAL: Section: E, Section No. 1324, Vol. 17, No. 91, Pg. 79, February 23, 1993 (19930223)

INTL CLASS: **H04N-001/40** ; **B41J-002/52** ; **B41J-002/525** ; G03G-015/01

ABSTRACT

PURPOSE: To naturally form dots and to improve image reproducibility by **changing** a binarizing parameter in each color or executing binarizing processing in accordance with color correlation...

...CONSTITUTION: A many-valued chrominance signal is inputted to **error diffusion** processing parts 1 to 4, and at the time of binarization, **thresholds** TC to TK are applied from the external to form binary chrominance signals CB to...

... 10 includes an information storing circuit, an adder and an information delay circuit. An error **density** component is added and then binarized by a comparator 12. The binary value is compared with a **threshold** and a **dot** printing/unprinting signal CB is outputted. An arithmetic part 11 computes error **density** information based upon the output CB, distributes the information to respective picture elements in an **error diffusion** matrix and applies the information to the adder 10. An OR gate 13 finds out logical OR of respective printing states of four colors. A **threshold** generating circuit 14 **changes thresholds** TC' to TK' while referring respective many-valued image information C to K and judges the high/low of printing **density** based upon the result of the OR gate 13. Since the **thresholds** are **changed** in each color and a conventional printing position is shifted, the picture quality of a...

15/3,K/19 (Item 19 from file: 347)
DIALOG(R)File 347:JAPIO
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03523163 **Image available**
PICTURE PROCESSOR

PUB. NO.: 03-186063 [JP 3186063 A]
PUBLISHED: August 14, 1991 (19910814)
INVENTOR(s): OKI JOJI
SAWAKI TAKAFUMI
APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 01-324051 [JP 89324051]
FILED: December 15, 1989 (19891215)

JOURNAL: Section: E, Section No. 1131, Vol. 15, No. 442, Pg. 118, November 11, 1991 (19911111)

INTL CLASS: **H04N-001/41** ; G06F-015/68

ABSTRACT

PURPOSE: To prevent a phenomenon, which is generated at the part of low picture **density** , to close and hit dots by **varying** a **threshold** value for **error dispersion** stop corresponding to the **density** of an input **picture element** .

...

... and signals 100, which are corrected by shading correction, etc., are simultaneously outputted to a **threshold** value setting circuit 4 for **error dispersion** stop and a binarizing processing circuit 5. In the **threshold** value setting circuit 4, a **threshold** value for **error dispersion** stop is set by the corrected signal 100 and on the other hand, in the...

... processing circuit 5, a binarizing processing is executed to the corrected signal 100. Then, an **error dispersion** processing at the time of binarizing is executed by a **threshold** value signal 200 outputted from the **threshold** value setting circuit 4. Namely, the variably set **threshold** value corresponding to input **picture element** data is compared with binarizing error and according to the compared result, **error dispersion** is executed. Thus, the phenomenon to close and hit the dots is prevented from being generated in the part of the low picture **density** .

15/3,K/20 (Item 20 from file: 347)

DIALOG(R)File 347:JAPIO
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03478868 **Image available**

PICTURE FORMING DEVICE

PUB. NO.: 03-141768 [JP 3141768 A]
PUBLISHED: June 17, 1991 (19910617)
INVENTOR(s): AOKI TAKAO
AKIYAMA YUJI
APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 01-278667 [JP 89278667]
FILED: October 27, 1989 (19891027)
JOURNAL: Section: E, Section No. 1110, Vol. 15, No. 359, Pg. 165, September 11, 1991 (19910911)

INTL CLASS: **H04N-001/40** ; **B41J-002/52**

ABSTRACT

... on the recording material of normal paper, etc., by forming binary multilevel picture data by **changing** the gamma characteristic of a gamma correcting means or the condition parameter of a prescribed...
...means and recording the data while being superimposed only by the number of times for **changing** .

...

...CONSTITUTION: In a full color bubble jet printer, etc., the **density** of

the input multilevel picture data is corrected by an input gamma correction part 109...

...a binary part 113, the corrected multilevel picture data are made binary by a determined **dither** method with condition such as an **error dispersion** method, etc. The gamma characteristic of this gamma correcting means, the parameter with condition or parameter such as **threshold** value of the binary part is **changed** through the CPU and when the same are is recorded by ink jet while being superimposed only by the number of times for **changing** , the high-quality picture is formed without overlapping a recording **dot** or blurring the ink even on the normal paper.

15/3,K/21 (Item 21 from file: 347)
DIALOG(R)File 347:JAPIO
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03371780 **Image available**
PICTURE PROCESSOR

PUB. NO.: 03-034680 [JP 3034680 A]
PUBLISHED: February 14, 1991 (19910214)
INVENTOR(s): MIYAKE NOBUTAKA
APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 01-167082 [JP 89167082]
FILED: June 30, 1989 (19890630)
JOURNAL: Section: E, Section No. 1061, Vol. 15, No. 165, Pg. 38, April 25, 1991 (19910425)

INTL CLASS: **H04N-001/40** ; G06F-015/68

ABSTRACT

PURPOSE: To eliminate dots in a low- **density** part and a link of void in a high- **density** part in the **error diffusion** method and a chain texture in middle and low- **density** parts by providing an already binarized window in the periphery of a weighted **picture element** and **changing** the binarization **threshold** of the noticed **picture element** based on the **dot** pattern in the window...

... which demarcates the area of an already binarized signal in the periphery of the noticed **picture element** , a **threshold** determining means which determines the **threshold** for binarization of the noticed **picture element** in accordance with the window means 10 and the **density** level of the noticed **picture element** of an inputted multilevel picture signal, and a binarizing means 30 which binarizes the weighted **picture element** by the **error diffusion** method in accordance with this **threshold** are provided. A pattern, especially, a link of dots in an oblique direction in the window is detected, and the **density** level of the original signal of the weighted **picture element** is discriminated to recognize the chain of the texture, and the **threshold** of the weighted **picture element** is **changed** in accordance with the texture. Thus, dots and a link of void as well as an uncomfortable chain texture in middle and low- **density** parts are eliminated.
?

25/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

012256391 **Image available**
WPI Acc No: 1999-062497/199906
XRPX Acc No: N99-046440
Printer **apparatus, system and driving method for desk-top publishing - comprises input signal determining** print **signal determining** ink **and dilute mix ratio at** dot print **head, mixing** ink **into dilute even when** printing **is performed based on input signal with** dot **information below** threshold density **determined by**
Patent Assignee: SONY CORP (SONY)
Inventor: NARUSHIMA T
Number of Countries: 030 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 888894	A2	19990107	EP 98401629	A	19980630	199906	B
AU 9873130	A	19990107	AU 9873130	A	19980624	199913	
JP 11020200	A	19990126	JP 97174796	A	19970630	199914	
CN 1204579	A	19990113	CN 98103582	A	19980630	199921	
KR 99007426	A	19990125	KR 9824902	A	19980629	200014	
AU 740608	B	20011108	AU 9873130	A	19980624	200176	
US 6341832	B1	20020129	US 98104284	A	19980625	200210	

Priority Applications (No Type Date): JP 97174796 A 19970630
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 888894	A2	E	31	B41J-002/21	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
AU 9873130	A			B41J-002/04	
JP 11020200	A		19	B41J-002/205	
CN 1204579	A			B41J-002/205	
KR 99007426	A			B41J-002/205	
AU 740608	B			B41J-002/04	Previous Publ. patent AU 9873130
US 6341832	B1			B41J-002/01	

Printer **apparatus, system and driving method for desk-top publishing...**

...**comprises input signal determining** print **signal determining** ink **and dilute mix ratio at** dot print **head, mixing** ink **into dilute even when** printing **is performed based on input signal with** dot **information below** threshold density **determined by**

...Abstract (Basic): The **printer** has a converting section for converting an input signal including information on **dots** to be **printed** into a **print** signal necessary for **printing** by performing predetermined conversion processing on the input signal. A **dot print** head (30) **prints dots** on a recording medium by forming an **ink** liquid for each **dot** by mixing **ink** and a dilute in a predetermined ratio based on the **print** signal...

...It jets the **ink** onto the recording medium. The converting section (41) converts the input signal into a **print** signal so that the **dot print** head mixes the **ink** into the dilute even in a case where **printing** is performed based on an input signal that includes a **dot** information which is below a **threshold density** determined by the **dot print** head...

...USE - For controlling mixed solution jetted by **varying** mixing ratio between **ink** and a dilute by **changing** the amount of a quantifying

medium, either the **ink** or the dilute, so **varying** the **density** on a **printed dot** basis...

...ADVANTAGE - **Density** can be varied on a **printed dot** basis. Consequently a photo-like image with many intermediate **gradation** levels without lowering the resolution can be **printed** out...
Title Terms: **PRINT** ;
International Patent Class (Main): **B41J-002/01** ...

... **B41J-002/04** ...

... **B41J-002/205** ...

... **B41J-002/21**
International Patent Class (Additional): **B41J-002/07** ...

... **B41J-002/175** ...

... **H04N-001/23** ...

... **H04N-001/405**

25/3,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

011925258 **Image available**
WPI Acc No: 1998-342168/199830
XRPX Acc No: N98-268051
Electrophotographic colour ink **-jet recording apparatus e.g. facsimile, digital copier, digital** printer **- has pseudo half-** tone **multi-value circuit that performs systematic** dither **process and four value process corresponding to four sorts of concentration-difference** ink **, to generate image data**
Patent Assignee: CANON KK (CANO)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10129010	A	19980519	JP 96291648	A	19961101	199830	B

Priority Applications (No Type Date): JP 96291648 A 19961101
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10129010	A		9	B41J-002/205	

Electrophotographic colour ink **-jet recording apparatus e.g. facsimile, digital copier, digital** printer **- ...**
...**has pseudo half-** tone **multi-value circuit that performs systematic** dither **process and four value process corresponding to four sorts of concentration-difference** ink **, to generate image data**

...Abstract (Basic): The apparatus has several **ink** -jet heads of same **dot density** that are relatively displace to a recording medium in a main scanning direction. **Inks** of **different** affiliated **colour** concentration are spewed from recording heads during the relative displacement of the heads in the main scanning direction. A **variable** magnification unit performs the **variable** magnification of the resolution of a recording image to the integral multiple of the **dot density** of the **ink** -jet heads...

...A distribution table is used to obtain four sorts of concentration difference **ink** corresponding to the **variable** magnification of the resolution of the recording image. A pseudo half- **tone** multi-value circuit (103) performs a systematic **dither** process and four value process to generate image data (D1-D4). A decimation circuit (104...

...outlet rows of recording head. Enables recording of image of high-resolution and high-level **tone** .
...Title Terms: **COLOUR** ;
International Patent Class (Main): **B41J-002/205**
International Patent Class (Additional): **B41J-002/485** ...

... **H04N-001/23** ...

... **H04N-001/387** ...

... **H04N-001/405**

25/3,K/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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010325566 **Image available**
WPI Acc No: 1995-226840/199530
Related WPI Acc No: 2000-248118
XRPX Acc No: N95-177782
Picture quality control method for thermal printer **- plotting** dot **even if due to be masked if its** density **exceeds first** threshold **or** density **of nearest** dots **does not exceed second** threshold
Patent Assignee: SHARP KK (SHAF)
Inventor: ADACHI Y; NAKAI Y; TAKEHARA T; TAKENO T; TANAKA T
Number of Countries: 005 Number of Patents: 009
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 660586	A2	19950628	EP 94120582	A	19941223	199530	B
JP 7186431	A	19950725	JP 93332890	A	19931227	199538	
JP 8020125	A	19960123	JP 94154780	A	19940706	199613	
EP 660586	A3	19960612				199632	
US 5721578	A	19980224	US 94365072	A	19941227	199815	
EP 660586	B1	20000705	EP 94120582	A	19941223	200035	
			EP 99124649	A	19941223		
DE 69425124	E	20000810	DE 625124	A	19941223	200045	
			EP 94120582	A	19941223		
JP 3200519	B2	20010820	JP 94154780	A	19940706	200149	
JP 3230918	B2	20011119	JP 93332890	A	19931227	200176	

Priority Applications (No Type Date): JP 94154780 A 19940706; JP 93332890 A 19931227
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 660586	A2	E	44	H04N-001/405	
Designated States (Regional): DE FR GB					
JP 7186431	A		12	B41J-002/36	
JP 8020125	A		17	B41J-002/36	
US 5721578	A		40	B41J-002/355	
EP 660586	B1	E		H04N-001/405	Related to application EP 99124649
					Related to patent EP 987879
Designated States (Regional): DE FR GB					

DE 69425124 E H04N-001/405 Based on patent EP 660586
JP 3200519 B2 18 B41J-002/36 Previous Publ. patent JP 8020125
JP 3230918 B2 12 B41J-002/36 Previous Publ. patent JP 7186431
Picture quality control method for thermal printer - ...

...**plotting** dot **even if due to be masked if its** density **exceeds first** threshold **or** density **of nearest** dots **does not exceed second** threshold

...Abstract (Basic): The method involves masking odd and even **dots** in adjacent rows and controls **dot density** by **varying** current feed time to a thermal head (1) heating element (19). The method detects if the **density** data of a noted **dot** (E) exceeds a prescribed high **density** value...

...It also determines if the **density** data of any of the four **dots** (B,D,F,H) nearest the noted **dot** is less or equal to a prescribed low **density** value. If one or more of these conditions is met, the noted **dot** is plotted, even if it corresponds to a **dot** to be masked...

...USE DVANTAGE - Esp. for **colour** fusion type thermal transfer **printers** . Reduces jaggies. Minimises moire in halftone **printing** .

...Abstract (Equivalent): The method involves masking odd and even **dots** in adjacent rows and controls **dot density** by **varying** current feed time to a thermal head (1) heating element (19). The method detects if the **density** data of a noted **dot** (E) exceeds a prescribed high **density** value...
...It also determines if the **density** data of any of the four **dots** (B,D,F,H) nearest the noted **dot** is less or equal to a prescribed low **density** value. If one or more of these conditions is met, the noted **dot** is plotted, even if it corresponds to a **dot** to be masked...

...USE DVANTAGE - Esp. for **colour** fusion type thermal transfer **printers** . Reduces jaggies. Minimises moire in halftone **printing** .

...Title Terms: **PRINT** ;
International Patent Class (Main): **B41J-002/355** ...

... **B41J-002/36** ...

... **H04N-001/405**
International Patent Class (Additional): **B41J-002/325** ...

... **H04N-001/52**

25/3,K/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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008749020 **Image available**
WPI Acc No: 1991-253034/199135
XRPX Acc No: N91-192916
Picture digitising system - changes **binary** threshold **data for comparison, with current input picture signal according to desired** density
Patent Assignee: NANNICHI T (NANN-I); TOSHIBA KK (TOKE)
Inventor: TOSHIFUMI Y; TOSHIHIKO N; NANNICHI T; YAMAMOTO T; MANNICHI T

Number of Countries: 003 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CA 2032342	A	19910616	CA 2032342	A	19901214	199135	B
JP 3186061	A	19910814	JP 89325548	A	19891215	199139	
JP 3186062	A	19910814	JP 89325549	A	19891215	199139	
JP 4078268	A	19920312	JP 90189752	A	19900718	199217	
JP 4160872	A	19920604	JP 90286272	A	19901024	199233	
US 5161036	A	19921103	US 90626707	A	19901214	199247	
CA 2032342	C	19931026	CA 2032342	A	19901214	199349	

Priority Applications (No Type Date): JP 90286272 A 19901024; JP 89325548 A 19891215; JP 89325549 A 19891215; JP 90189752 A 19900718
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 4160872	A		8	H04N-001/40	
US 5161036	A		21	H04N-001/40	
CA 2032342	C			G06F-015/66	

... changes **binary** threshold **data for comparison, with current input picture signal according to desired** density

...Abstract (Basic): The system is effective when it is desired to reproduce a picture having a half- **tone** level. Binary **threshold** data for comparison with a current picture signal is randomly **changed** slightly within a predetermined range to such an extent that users cannot recognise **change** in the level of the binary **threshold** data, thus preventing the continuation of such regular binary pattern...

...Further, the binary **threshold** data for comparison with a current input picture signal is **changed** according to a desired **density** to obtain a binary picture signal corresponding to the desired **density** .

...Abstract (Equivalent): device for inputting a picture signal obtained through raster scanning operation of a picture. Binary **threshold** data is created for a current input picture signal by subjecting the current input picture...

...a predetermined weighting operation on the basis of past binary data already digitised. The bindary **threshold** data is compared with the current input picture signal to create binary data for the...

...temporarily stores the binary data before feeding it back as past binary data. The binary **threshold** data created in the data creator is randomly charged within a predetermined range...

...USE/ADVANTAGE - For reproducing digitised picture with half- **tone** level using **dot printer** . Avoids deterioration of picture quality even with **varying** or artificially constant picture **density** . Reduced hardware size...
...Title Terms: **CHANGE** ;
...International Patent Class (Main): **H04N-001/40**

25/3,K/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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007790593 **Image available**
WPI Acc No: 1989-055705/198908

XRPX Acc No: N89-042425

Half- tone **image reproduction method for thermal** printer **- setting energy control level for each element in accordance with** different **rules, each rule providing independent and suitable level** change

Patent Assignee: TOSHIBA KK (TOKE)

Inventor: HIGUHI K; HIRAHARA S; YAMADA K

Number of Countries: 006 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 304289	A	19890222	EP 88307630	A	19880817	198908	B
JP 1047546	A	19890222	JP 87203393	A	19870818	198914	
US 4910603	A	19900320	US 88233361	A	19880818	199017	

Priority Applications (No Type Date): JP 87203394 A 19870818; JP 87203393 A 19870818

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 304289	A	E	37		

Designated States (Regional): DE FR GB IT

Half- tone **image reproduction method for thermal** printer **- ...**

...**setting energy control level for each element in accordance with** different **rules, each rule providing independent and suitable level** change

...Abstract (Basic): The half- **tone** image reprodn. apparatus comprises a **Dither** matrix memory (12), constituted by a number of elements, for storing a multi-level **Dither** matrix having multi- **threshold** levels assigned to the individul elements. In the reprodn. method input data supplies (10,11) supply the element on the **Dither** matrix (12) and an input **density** level. A **print dot** former (13,14) produces **print dots** in accordance with the energy control level selectively read out from the **Dither** matrix memory (12). The energy control level stored in the **Dither** matrix memory (12) is set in accordance with rules for **changing** the energy control level in accordance with a **change** in input **density** level...

...These rules are independently suitably determined for the respective partial **density** ranges which constitute a whole **density** range for the input **density** .

...

...USE/ADVANTAGE - Also with optical **printer** . **Gradation** jump and deformation at a high **density** region can be prevented so that half-**tone** image with smooth **gradation** and high resolution can be attained

...Abstract (Equivalent): A half- **tone** image reproduction appts. comprises a **Dither** matrix memory with elements for storing a multi-level **Dither** matrix having multi **threshold** levels assigned to the individual elements. **Print dots** are formed in accordance with the energy control level selectively read out from the **Dither** matrix memory...

...The energy control level stored in the **Dither** matrix memory is set in accordance with rules for **changing** the energy control level in accordance with a **change** in input **density** level...

...These rules are independently suitably determined for the respective partial **density** ranges which constitute a whole **density** range for the input **density** .

...

...ADVANTAGE - **Gradation** jump and deformation at high **density** region can be prevented so that half- **tone** image with smooth **gradation** and high resolution can be attained. (37pp)
...Title Terms: **TONE** ;
International Patent Class (Additional): **H04N-001/40**

25/3,K/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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004229978
WPI Acc No: 1985-056857/198510
XRPX Acc No: N85-042500
Thermal printing **head control system - supplies control pulses to select heat generating elements in accordance with** threshold **signal**
Patent Assignee: RICOH KK (RICO)
Inventor: KAWAKAMI T; MORI M; OKADA C
Number of Countries: 002 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 3329311	A	19850228	DE 3329311	A	19830813	198510	B
US 4688051	A	19870818	US 85732886	A	19850508	198735	
DE 3329311	C	19910822				199134	

Priority Applications (No Type Date): DE 3329311 A 19830813; US 85732886 A 19850508
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3329311	A		44		

Thermal printing **head control system**...
...**supplies control pulses to select heat generating elements in accordance with** threshold **signal**

...Abstract (Basic): pulses is adjusted such that the pulses supplied to each selected element correspond to a **threshold** signal...

...The temperature of a predetermined part of the thermo- **printing** head is fixed, and the width of the control pulses is adjusted in accordance with the set temp. The image produced is a half- **tone** image...

...USE/ADVANTAGE - For thermal recording devices used in conjunction with **printer** , copier or facsimile appts. Provides rapid response in driving the thermo- **printing** head and has good half- **tone** reproduction...
...Abstract (Equivalent): The operating pulses consist of individual pulses with **variable** pulse width ratio. The temperature of the pressure section of the thermal **printer** head is measured and the mark-space ratio of the operating pulses is corrected in...

...ADVANTAGE - Very accurate control of half **tone** level of image with low temp. of **printing** head. (18pp)
...Abstract (Equivalent): of a number of heat-producing elements arranged in a line to record a single **dot** of desired **tone** . The width of each pulse is controlled in accordance with the temperature at or in the vicinity of the elements allowing the **density** level of the desired **tone** to be maintained at a constant value...

...heat-producing elements in a continuous manner without producing a

cooling period during switching between **tone** levels. It is also designed so that a predetermined number of driving pulses for each of the **tone** levels is altered in consideration of data in at least one preceding recording lines thus carrying out a high speed recording operation without causing fluctuations in predetermined **tone density** level...

...USE/ADVANTAGE - Output device of **printers** , copiers and facsimile machines, has faster operation and improved half **tone** reproduction. (20pp Dwg.No 14a/21)u
...Title Terms: **PRINT** ;
International Patent Class (Additional): **B41J-002/36** ...

... **B41J-003/20** ...

... **H04N-001/22**

25/3,K/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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003787902
WPI Acc No: 1983-784130/198341
XRPX Acc No: N83-179136
Half- tone **image processor for recording and display - has image data input stage, with converters to analog and digital image output signals respectively**
Patent Assignee: CANON KK (CANO)
Inventor: KADOWAKI H; KAWAMURA N
Number of Countries: 005 Number of Patents: 013
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 3312273	A	19831006				198341	B
FR 2524744	A	19831007				198345	
JP 58173972	A	19831012	JP 8989130	A	19890000	198347	
JP 58173973	A	19831012				198347	
GB 2120896	A	19831207	GB 8523272	A	19850920	198349	
GB 2163318	A	19860219	GB 839174	A	19830405	198608	
GB 2120896	B	19870128				198704	
GB 2163318	B	19870325				198712	
US 4783837	A	19881108	US 86881492	A	19860701	198847	
JP 2007667	A	19900111				199008	
DE 3312273	C	19900621				199025	
US 5666444	A	19970909	US 83480823	A	19830331	199742	
			US 86881492	A	19860719		
			US 88152024	A	19880203		
			US 92833649	A	19920205		
			US 94326343	A	19941020		
			US 95476683	A	19950607		
US 5712929	A	19980127	US 83480823	A	19830331	199811	
			US 86881492	A	19860701		
			US 88152024	A	19880203		
			US 92833649	A	19920205		
			US 94326343	A	19941020		

Priority Applications (No Type Date): JP 8256965 A 19820406; JP 8256964 A 19820406; JP 8989130 A 19890000
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes

DE 3312273	A	62		
US 5666444	A	31	G06K-009/38	Cont of application US 83480823 Div ex application US 86881492 Cont of application US 88152024 Cont of application US 92833649 Div ex application US 94326343 Div ex patent US 4783837
US 5712929	A	32	G06K-009/38	Cont of application US 83480823 Div ex application US 86881492 Cont of application US 88152024 Cont of application US 92833649 Div ex patent US 4783837

Half- tone **image processor for recording and display**...

...Abstract (Basic): The image processor improves the resolution of the recorded or reproduced half- **tone** image both for a laser beam or **ink** jet **printers** . The image processor has an input stage for the image data and two converters, one...

...signal in coincidence with the output signal of the second converter. The latter may transmit **different** digital signals in coincidence with the input image data. It may contain a **threshold** value matrix for comparison with the input image data. Several such matrices may be provided for generating the **different** digital signals. The second converter may contain a comparator for simultaneous comparison of the input image data with several **threshold** value matrices...

...Abstract (Equivalent): The image processor improves the resolution of the recorded or reproduced half- **tone** image both for a laser beam or **ink** jet **printers** . The image processor has an input stage for the image data and two converters, one...

...signal in coincidence with the output signal of the second converter. The latter may transmit **different** digital signals in coincidence with the input image data. It may contain a **threshold** value matrix for comparison with the input image data. Several such matrices may be provided for generating the **different** digital signals. The second converter may contain a comparator for simultaneous comparison of the input image data with several **threshold** value matrices...

...A **color** image recording apparatus comprising...

...generating means for generating a **color** image signal...

...record means for recording a **color** image...

...supply means for supplying a control signal according to a **variable** magnification to said generating means, wherein said generating means generates a **color** image signal according to a **variable** magnification on the basis of the control signal supplied by said supply means...

...first conversion means for converting the **color** image signal generated in accordance with a **variable** magnification by said generating means into a record **color** image signal adaptable for said record means; and ...

...second conversion means for converting the record **color** image signal from said first conversion means into a **dot color** image signal according to a **density** level of the record **color** image signal to

supply the **dot color** image signal to said record means...

...wherein said record means records a **color** image on the basis of the **dot color** image signal supplied by said second conversion means, and ...

...perform a conversion operation in synchronism with a clock signal that is independent of a **variable** magnification, and in synchronism with a recording operation of said record means...
...Title Terms: **TONE** ;
International Patent Class (Additional): **B41J-002/00** ...

... **B41J-003/04** ...

... **H04N-001/00**

25/3,K/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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003741520
WPI Acc No: 1983-737719/198333
XRAM Acc No: C83-077786
XRPX Acc No: N85-220760
Image processor e.g. for laser or ink **-jet** printer **-processes data using predetermined** threshold **matrix so that** dot **pitch is constant in low** density **area**
Patent Assignee: CANON KK (CANO)
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 58114570	A	19830707				198333 B
US 4553173	A	19851112				198548

Priority Applications (No Type Date): JP 81209563 A 19811226
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 58114570	A		14		

Image processor e.g. for laser or ink **-jet** printer **-processes data using predetermined** threshold **matrix so that** dot **pitch is constant in low** density **area**

...Abstract (Basic): outputting a reproduction signal from an image signal from the A/D converter and a **threshold** level signal. The output device has circuitry for controlling the reproduction signal so that a **dot** pitch of an image recorded or displayed in accordance with the reproduction signal is constant. The controller has a pulse width modulator means for **changing** a pulse width of the reproduction signal in accordance with the **threshold** level signal...

...The data is processed by utilising a predetermined **threshold** matrix such that the **dot** pitch of the output image is constant in in an area having low **density** . The apparatus may **change** the **dot** size of a **dot** image pattern to be output...

...ADVANTAGE - Capable of producing output image of good quality and stable halftone image with high **gradation** and resolution. (First major country equivalent to J58114570)

...Title Terms: **INK** ;
...International Patent Class (Additional): **H04N-001/40**

25/3,K/9 (Item 9 from file: 347)
DIALOG(R)File 347:JAPIO
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06011760 **Image available**
IMAGE PROCESSOR

PUB. NO.: 10-294860 [JP 10294860 A]
PUBLISHED: November 04, 1998 (19981104)
INVENTOR(s): OUCHI SATOSHI
YAMAKAWA SHINJI
APPLICANT(s): RICOH CO LTD [000674] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 09-100317 [JP 97100317]
FILED: April 17, 1997 (19970417)

INTL CLASS: **H04N-001/40** ; **H04N-001/46**

ABSTRACT

... with high picture quality by reducing the erroneous recognition of original kind discrimination by making **variable** a discrimination reference for discriminating the kind of original, and determining the discrimination reference corresponding...

... be automatically discriminated. An original discrimination circuit 5 detects a peak pixel and discriminates a **dot printing** or photographic paper original by comparing its **density** level with that of surrounding pixels. Next, a tracking pattern is detected and counted over...

... whether it is a generation original or not is discriminated in comparison with a prescribed **threshold** value. While receiving the discriminated result, a **color** correction coefficient storage part 6 selects CMY signals at suitable intervals, a **printer** approximate formula is found, a **color** correction coefficient group is found and set in the **color** correction coefficient storage part 6 so that a generation original **color** can be matched with a **printed** -out **color** and while using this **color** correction coefficient, images are reproduced.

25/3,K/10 (Item 10 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2004 JPO & JAPIO. All rts. reserv.

04454274 **Image available**
PICTURE PROCESSOR

PUB. NO.: 06-098174 [JP 6098174 A]
PUBLISHED: April 08, 1994 (19940408)
INVENTOR(s): UEDA TADASHI
APPLICANT(s): RICOH CO LTD [000674] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 04-246165 [JP 92246165]
FILED: September 16, 1992 (19920916)
JOURNAL: Section: E, Section No. 1576, Vol. 18, No. 369, Pg. 10, July 12, 1994 (19940712)

INTL CLASS: **H04N-001/40** ; G06F-015/68

ABSTRACT

PURPOSE: To improve the picture quality in **printing** or display...

...CONSTITUTION: A CPU 11 judges whether or not the number of degrees of **gradation** of inputted **dither** data is less than that contained in a **printer** 5 (or may be display device), converts the input **dither** data into the data of a continuous **gradation** (the **gradation** value of the **printer** 5) when the **gradation** of the input **dither** data is less than that of the **printer** 5, outputs the data to the **printer** 5, and allows the **printer** 5 to **print** the data. And also, the start point of the inputted **dither** data is detected, and a picture **density** at the point of a time when the **dither** data are prepared is searched by specifying the position of the **dither** data block of the inputted **dither** . Moreover, the **gradation** of each **dot** is calculated by **changing** the method of calculating the **gradation** according to a **dot** coordinate to calculate the **gradation** and a **gradation** difference between **dot** groups.

25/3,K/11 (Item 11 from file: 347)

DIALOG(R)File 347:JAPIO
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03748761 **Image available**

ELECTROPHOTOGRAPHIC **PRINTER**

PUB. NO.: 04-113861 [JP 4113861 A]
PUBLISHED: April 15, 1992 (19920415)
INVENTOR(s): YOSHIDA KAZUYOSHI
KIKUCHI KO
TEJIMA MINORU
APPLICANT(s): OKI ELECTRIC IND CO LTD [000029] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 02-232493 [JP 90232493]
FILED: September 04, 1990 (19900904)
JOURNAL: Section: M, Section No. 1290, Vol. 16, No. 363, Pg. 121, August 05, 1992 (19920805)

ELECTROPHOTOGRAPHIC **PRINTER**

INTL CLASS: **B41J-002/44** ; **B41J-002/45** ; **B41J-002/455** ; G03G-015/04; **H04N-001/036**

ABSTRACT

PURPOSE: To improve **printing** quality of a **variable density** surface image by making a **gradation** charateristic due to areal **gradation** of a **dither** method or the like excellent by a method wherein applicable energy of each LED element is varied according to presence or not of a **printing** data of a **dot** existing around an optional **dot** to be **printed** in an LED head...

...CONSTITUTION: When a **printing** data P(sub 1) is of a High level, output of an AND circuit 60...

...57, only when a decoder output Y(sub 1) is of a Low level, a **printing** data P(sub 2) is of a Low level, and a **printing** data P(sub 1) is of a High level, the output signal X comes to...

...sub 1). A driving pulse by t(sub 0) is a pulse for executing essential

printing , and a t(sub 1)-t(sub 8) pulse is a correcting pulse to be applied by a data. The less a number of circumferential ON **dots** is, energy to be applied is made the larger. The more the number of circumferential On **dots** is, the energy to be applied is made the less.

25/3,K/12 (Item 12 from file: 347)
DIALOG(R)File 347:JAPIO
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02921246 **Image available**
COLOR INK JET RECORDING APPARATUS

PUB. NO.: 01-218846 [JP 1218846 A]
PUBLISHED: September 01, 1989 (19890901)
INVENTOR(s): NAGAMORI KAZUHARU
SAKATA MASATOSHI
APPLICANT(s): HITACHI SEIKO LTD [329855] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 63-044149 [JP 8844149]
FILED: February 29, 1988 (19880229)
JOURNAL: Section: M, Section No. 899, Vol. 13, No. 535, Pg. 87, November 29, 1989 (19891129)

COLOR INK JET RECORDING APPARATUS

INTL CLASS: **B41J-003/04** ; **B41J-003/04** ; **H04N-001/23**
...JAPIO KEYWORD: **Ink** Jet **Printers**)

ABSTRACT
... by providing a counter capable of arbitrarily taking out a recording data signal indicating the **variable density** level of a pixel in synchronous relation to the generation of an **ink** jet particle...

...circuit 22. An address signal is successively outputted to a memory part 25 storing a **threshold** value in synchronous relation to the generation of **ink** jet particles and the **threshold** value stored in the address concerned is taken out to be inputted to a comparing circuit 26. Memory data indicating the **variable density** level of a pixel is taken out at the cycle set to the counter 27 synchronous to the generation of the **ink** jet particle to be inputted to the latch circuit 21 and compared with the aforementioned **threshold** value by the comparing circuit 26 and a **dot** recording signal is outputted corresponding to the comparing result.

25/3,K/13 (Item 13 from file: 347)
DIALOG(R)File 347:JAPIO
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02069175 **Image available**
PICTURE RECORDER

PUB. NO.: 61-283275 [JP 61283275 A]
PUBLISHED: December 13, 1986 (19861213)
INVENTOR(s): OOTA SHINICHI
APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 60-123522 [JP 85123522]
FILED: June 08, 1985 (19850608)
JOURNAL: Section: E, Section No. 505, Vol. 11, No. 145, Pg. 85, May

12, 1987 (19870512)

INTL CLASS: **H04N-001/40**

ABSTRACT

PURPOSE: To obtain a half **tone** picture without having picture unevenness by converting the half **tone** picture signal of a low **density** component to a binary picture signal corresponded with a **dot** forming **density** pattern and converting the half **tone** picture signal of other that the low **density** component to the binary picture signal corresponded with a multi-valued **density** pattern...

...an X address counter 63 and a Y address counter 64 is compared with the **thresholds** of matrix memories 65 and 66 assigned at a column counter 67 and a low...

...or 70 is selected at a multiplexer 71 and it is sent to a laser **printer** 72 as the binary picture signal. When the low **density** level, for example, under 16 of a **variable density** picture signal component is converted to a binary picture out of the picture data inputted by the **dot** forming **density** pattern, so that it is converted to the binary picture at a **density** area prior to the generation of **density** unevenness, the **density** unevenness is suppressed to the utmost.

25/3,K/14 (Item 14 from file: 347)

DIALOG(R)File 347:JAPIO
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01678875 **Image available**

HALFTONE EXPRESSING SYSTEM

PUB. NO.: 60-157375 [JP 60157375 A]
PUBLISHED: August 17, 1985 (19850817)
INVENTOR(s): HISATAKE MASAYUKI
MORIGUCHI HARUHIKO
INUI TOSHIJI
NOGUCHI AKIO
APPLICANT(s): FUJI XEROX CO LTD [359761] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 58-241635 [JP 83241635]
FILED: December 21, 1983 (19831221)
JOURNAL: Section: E, Section No. 368, Vol. 09, No. 325, Pg. 103, December 20, 1985 (19851220)

INTL CLASS: **H04N-001/40** ; **B41J-003/04** ; **B41J-003/10**
...JAPIO KEYWORD: **Ink** Jet **Printers**)

ABSTRACT

... element patterns and to improve its picture quality by determining the kind and number of **dots** that constitute picture elements according to the **density** of halftone, and **changing** arrangement of **dots** by comparing these values with peripheral **dots** .

...

...CONSTITUTION: Picture signals made to signals after reading an original picture are compared with the **threshold** value of 2X2-matrix ternary **dither** in a comparator circuit 1 and stored in a memory 2. Two continous rasters of...

...by a selector 3 and transferred to a register 4 as 2-bit information of **dot** . Transferred information is sent to a relational operating circuit 8 in unit of 8 bits...

... result of judgement is sent to a CPU9. In response to this result, the CPU9 **changes** arrangement of **dot** pattern of 2X2-materices.

25/3,K/15 (Item 15 from file: 347)
DIALOG(R)File 347:JAPIO
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01626873 **Image available**
IMAGE **VARIABLE** POWER DEVICE

PUB. NO.: 60-105373 [JP 60105373 A]
PUBLISHED: June 10, 1985 (19850610)
INVENTOR(s): JINNAI KOICHIRO
FUKAZAWA TAKAO
ITO TADASHI
KOIKE TAKANAO
MURAI TOSHIHARU
ISHIMA KAZUMI
APPLICANT(s): RICOH CO LTD [000674] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 58-212958 [JP 83212958]
FILED: November 11, 1983 (19831111)
JOURNAL: Section: E, Section No. 350, Vol. 09, No. 258, Pg. 28, October 16, 1985 (19851016)

IMAGE **VARIABLE** POWER DEVICE

INTL CLASS: **H04N-001/387**
...JAPIO KEYWORD: **Ink** Jet **Printers**)

ABSTRACT

PURPOSE: To enable to obtain the **variable** power of an image by making a fundamental picture element correspond to the (m)X(n) **dot** matrix of a hard copy, by making the matrix have a **density** level by the presence or absence of the **dot** , and **changing** a **dither** matrix size...

... rank bit value is ''0'' as the result of comparing some one picture element, two- **dot** lines, that is, four **dots** in total are written in a memory 13 in correspondence to one picture element of...

25/3,K/16 (Item 16 from file: 347)
DIALOG(R)File 347:JAPIO
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01610665 **Image available**
PICTURE RECORDER

PUB. NO.: 60-089165 [JP 60089165 A]
PUBLISHED: May 20, 1985 (19850520)
INVENTOR(s): SUGIURA SUSUMU
AGARI YASUO
SATO HIROAKI
APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP

(Japan)
APPL. NO.: 58-197185 [JP 83197185]
FILED: October 20, 1983 (19831020)
JOURNAL: Section: E, Section No. 344, Vol. 09, No. 234, Pg. 141, September 20, 1985 (19850920)

INTL CLASS: **H04N-001/032** ; **H04N-001/40** ; **B41J-003/04**
...JAPIO KEYWORD: **Ink** Jet **Printers**)

ABSTRACT
PURPOSE: To increase the number of contrast **gradations** by setting the contrast ratio of dark **dots** and light **dots** near a value satisfying the prescribed relation of an equation in a picture recorder representing the contrast with the space factor of **dots** in a block...

...CONSTITUTION: In expressing the contrast by means of the space factor of **dots** to a block comprising n (3X3 in this example) cells, a light **dot threshold** value matrix A and a dark **dot threshold** value matrix B where the contrast of one picture element of an original picture is represented by a **changing threshold** number are set so that the order of arrangement of the **threshold** values is inverted. The relation of the **dot** space factor is set near Dl:Dd=1:n+1, that is, (n+1)-sets of space factors of light **dots** are provided to one space factor of dark **dots** , where Dd is a reflection optical contrast when the dark **dots** are recorded with uniform **density** , and Dl is a reflection optical contrast when the light **dots** are recorded with the same **density** as that of the dark **dots** . Thus, the number of **gradations** to be expressed is a maximum of (n+1)(sup 2).

25/3,K/17 (Item 17 from file: 347)
DIALOG(R)File 347:JAPIO
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01229473 **Image available**
GRADATION COMPENSATING DEVICE

PUB. NO.: 58-166873 [JP 58166873 A]
PUBLISHED: October 03, 1983 (19831003)
INVENTOR(s): WATANABE HIDEAKI
APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 57-048676 [JP 8248676]
FILED: March 26, 1982 (19820326)
JOURNAL: Section: E, Section No. 219, Vol. 07, No. 292, Pg. 87, December 27, 1983 (19831227)

GRADATION COMPENSATING DEVICE

INTL CLASS: **H04N-001/40**

ABSTRACT
PURPOSE: To reduce the variance of **density** due to the difference of heat dissipating characteristics, by **changing** in stepwise the relation between the **density** level of an input picture signal and the electric energy which is applied to a...

...CONSTITUTION: For a heat-sensitive recording head 1, the heat **printing** heat generating resistors 1a are arranged in a parallel and linear form and then divided into 5 blocks of (m) **dots** each to form a matrix of (m) rows

and 5 columns. One side of (m...

... switching circuit 2 and shift registers 3a-3d. Then a picture signal containing a half **tone** is supplied to a comparator group 5 through an input terminal 4. The group 5 discriminates the picture signal into the **threshold** value of plural stages in response to the amplitude of the picture signal and gives...

...encoder 6. Then a coded picture signal is stored in a data RAM 8. The **gradation** designating data delivered from a **gradation** designating ROM 7 are compared by a comparator 9 simultaneously with the reading of the...

...8 and then applied to the registers 3a-3d. As a result, the variance of **density** due to the difference of heat dissipating characteristics can be reduced.

25/3,K/18 (Item 18 from file: 347)
DIALOG(R)File 347:JAPIO
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00880797 **Image available**
VARIABLE DENSITY PICTURE RECORDING SYSTEM

PUB. NO.: 57-031097 [JP 57031097 A]
PUBLISHED: February 19, 1982 (19820219)
INVENTOR(s): YOSHIDA KUNIO
KODERA HIROAKI
TSUDA YUKIFUMI
SUGANO YOSHIMITSU
NAKA KISON
APPLICANT(s): MATSUSHITA GIKEN KK [470836] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 55-106081 [JP 80106081]
FILED: July 31, 1980 (19800731)
JOURNAL: Section: P, Section No. 121, Vol. 06, No. 100, Pg. 26, June 09, 1982 (19820609)

VARIABLE DENSITY PICTURE RECORDING SYSTEM

INTL CLASS: G06K-015/10; **B41J-003/04** ; G01D-015/18; **H04N-001/22**
...JAPIO KEYWORD: **Ink** Jet **Printers**)

ABSTRACT

PURPOSE: To improve a **density** reproducing characteristic through permitting an output **density** for an input **density** to probably make upper and lower distributions of a central value, by deciding a generating ...

...an instantaneous value against an input through adding the second signal given by a probability **density** function having said generating probability as a **variable** to an input **density** signal...

...CONSTITUTION: A picture having **variable density** is scanned and a picture signal according to the **density** is generated from a picture signal generator 1. Further said picture signal is added to...

... device 4, and a picture signal corrected in the corrector 4 is recorded in a **variable density** picture recorder 5, thereby recorded **dots** of a recording medium 6 are formed by the storage 5. The second signal from...

...valve is a value ranging 0.25-2 times the input value corresponding to a **threshold** value of output **density** .
?